Department of Pesticide Regulation

Cal/EPA Environmental Enforcement Report

2009

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DEPARTMENT OF PESTICIDE REGULATION

I. EXECUTIVE SUMMARY

The California Department of Pesticide Regulation's (DPR's) mission is to protect human health and the environment by regulating pesticide sales and use and by fostering reduced-risk pest management. Since its creation in 1991, DPR has made significant strides to:

- Enhance worker and environmental protections.
- Strengthen uniformity of enforcement in the field while maintaining local discretion and flexibility.
- Streamline the regulatory process to encourage registration of safer materials.
- Encourage the development and use of reduced-risk pest management practices.
- Use existing and new statutory requirements to ensure the completion of an up-to-date toxicological database for all pesticide active ingredients.
- Strengthen exam and certification processes for commercial pesticide applicators.

DPR's regulatory control begins with the evaluation and registration of pesticide products, and continues through statewide licensing of commercial pesticide applicators, dealers and consultants; environmental monitoring; residue testing of fresh produce; and local enforcement by County Agricultural Commissioners (CACs).

About 340 DPR employees, including scientists from many disciplines, carry out California's pesticide regulatory program. In addition, approximately 280 full-time biologists dedicated to pesticide use enforcement work for CACs who are responsible for local pesticide enforcement.

DPR's annual budget is approximately $73 million of which about $19 million funds local pesticide enforcement activities in the counties.

Note: Current-year statistics in this report are preliminary in nature due to lag times in reporting and compiling data. Prior-year statistics have been updated and therefore may not match the statistics as reported in previous editions of this report.

Program Structure

DPR uses a "function-based" approach to better manage the performance and costs of its programs. Enforcement of statutory and regulatory requirements within this framework allows DPR to determine compliance with these requirements and to assess their effectiveness relative to costs, workload outputs, and impacts on human health and the environment. Elements of DPR's planning and management system include:

- Cal/EPA's Strategic Vision that sets forth the Agency's vision and mission, core values, and goals and objectives.
- DPR's Strategic Plan that provides department-specific strategies, goals and objectives.
- DPR's Operational Plan that defines goals and activities it plans to carry out during the fiscal year.
- Performance measures that include DPR's outputs and environmental indicators. They are used to assess the effectiveness of DPR's program.
- Function-based accounting that summarizes spending by function category.

Key DPR workload outputs are compiled **annually by fiscal year** to track the number of products and services that DPR produces, for example, the number of licenses issued or groundwater samples collected. These outputs are categorized by DPR's program functions. The materials are available on DPR's website at www.cdpr.ca.gov/dept/planning/performance/index.htm.

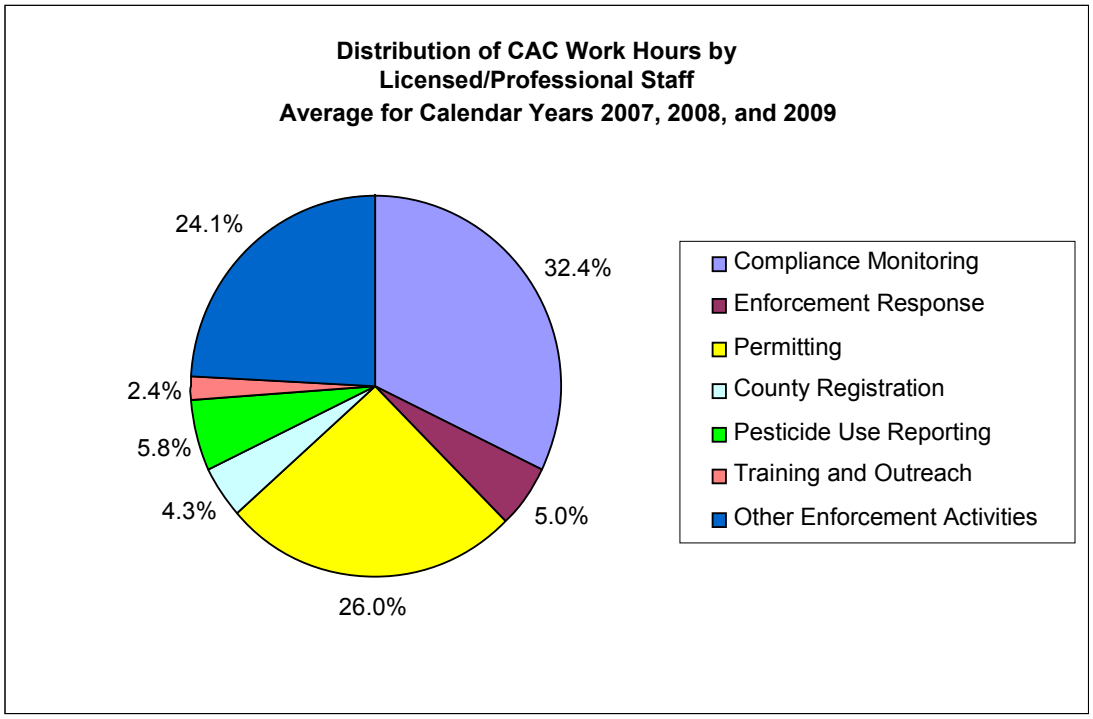
Since 2002, DPR has implemented several new programs to strengthen its enforcement programs to better protect California's workers and the public, and ensure a safe food supply and a healthy environment. At the same time, these programs strive to create an environment in which agriculture can be sustained for future generations.

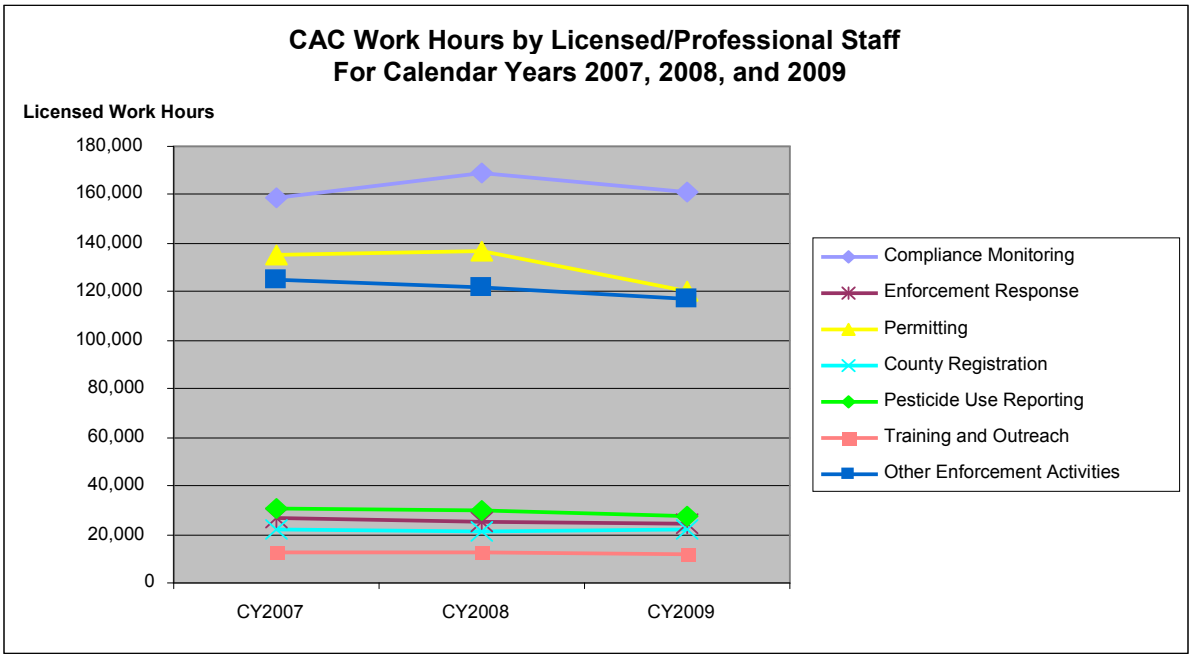
When taken together, the following new programs and approach to program planning and evaluation will lead to improved compliance with pesticide and environmental laws and regulations.

DPR and the CACs spent considerable time evaluating their programs and identifying areas for improvement. In late 2004, DPR developed program guidance identifying three core program priorities to better target county enforcement efforts:

- Restricted material permitting.
- Compliance monitoring through inspections and investigations.
- Enforcement response to violations.

The following charts summarize distribution of CAC work hours by licensed/professional staff for 2007, 2008, and 2009. "Other enforcement activities" includes general management and supervisory time across the workload categories. Conservatively, inclusive of management and supervision, the CACs consistently expend 75 percent of their work hours in the three core enforcement program areas.





Source: Pesticide Regulatory Activities Monthly Report Database (5/26/2010)

In 2002, Assembly Bill (AB) 947 became law, augmenting civil penalty authority granted to DPR and the CACs by increasing the fine levels from $1,000 to $5,000 per violation. In 2005, Senate Bill (SB) 391 became law, allowing DPR and the CACs to levy a penalty for each person exposed as a result of a violation.

Also in 2005, DPR and the CACs jointly developed the Enforcement Response Policy that laid out a standardized approach to classifying violations and taking appropriate enforcement actions. This policy was formally adopted into regulations in late 2006 and is more fully described below. DPR maintains two databases are that used to track (1) county and DPR inspections and compliance rates, and (2) final enforcement actions taken by the counties.

California's pesticide regulatory program is considered by many to be a model program. DPR's comprehensive system used to track pesticide use has been at the forefront both nationally and internationally. Since 1990, growers and applicators must report all agricultural, structural, landscape maintenance, and other nonagricultural pest control applications to the CACs. DPR compiles and makes available statewide pesticide use data on an annual basis. More information about this unique program is available on DPR's website at http://www.cdpr.ca.gov/docs/pur/purmain.htm.

DPR's Worker Health and Safety Branch has been collecting and analyzing pesticide illness data for decades. In the pesticide use enforcement arena, DPR uses inspection reports to document compliance rates and the CACs submit annual reports to DPR that document their workload activities and hours, and enforcement. DPR's Environmental Monitoring Branch collects and analyzes the results of air and ground water monitoring projects.

As noted in previous reports, DPR has not integrated and analyzed data from these various sources to fully assess the impacts of its programs to improve environmental and human health. In 2009, DPR's Enforcement Branch continued its efforts to create a multi-disciplinary team with highly specialized analytical, statistical, and research skills in the areas of environmental and human health related to the

impacts of pesticide use. The Enforcement Branch convened a work group that defined an effective enforcement program and how one would measure performance and success. The work group consisted primarily of DPR field staff and CAC pesticide deputies, as well as DPR headquarters and USEPA staff. The results of their discussions are now the basis for more focused and in-depth internal branch performance measures work groups that will continue the work.

A) 2009 Major Program Highlights

Food Safety: DPR conducts the nation's most extensive state program for monitoring pesticide residues in fresh produce. DPR monitoring is designed to assure that all produce – domestic or foreign – does not contain illegal pesticide residues. The monitoring results continue to show that the vast majority of California-grown produce is either free of detectable pesticide residues, or has low residues that are within the legal tolerances established by U.S. EPA.

Just as important, DPR's residue monitoring helps identify specific sources of produce where action is needed. In particular, DPR's data and outreach helped spur Guatemalan exporters to address a series of problems with illegal residues in Guatemalan snow peas. This year, the two-year average of Guatemalan snow peas with illegal residues dropped to only 4.3%, down from more than 50% several years ago. DPR believes that this proactive approach of outreach to producers and exporters is most likely to produce long-term solutions.

In recent years, Mexican fruits and vegetables have accounted for nearly half of all illegal residues detected by DPR. This is partly due to the high volume of imported commodities from Mexico, but also because a relatively high proportion of those commodities carry illegal residues. In 2009, approximately 3.5 percent of the 864 samples of Mexican produce had illegal residues. Most notably, in 2009 DPR detected substantial residues of acutely-toxic insecticides in both papayas and long beans from Mexico. DPR is now exploring outreach options to address these problems.

DPR is also actively improving its capacity to detect residues of even the most recently-developed pesticides by adding an analytical technique called LCMS (liquid chromatography mass spectrometry). LCMS can detect residues of new pesticides that have chemistries that are difficult to detect with the routine multi-residue screens. A 2009 pilot to test the new LCMS methodology was very successful. In particular, LCMS successfully detected a low-level illegal fungicide residue on a sample of leaf lettuce. That fungicide residue would not have been detectable using only the old multi-residue screens. DPR contacted the distributor to ensure the lot of contaminated lettuce was removed from sale. The pilot project will continue with additional commodities in 2010. DPR looks forward to expanding our use of LCMS to further strengthen our ability to detect the widest possible range of pesticides.

Enforcement Response Regulations (ERR): Consistent statewide enforcement of California's environmental laws is paramount for the protection of California's people, property, and the environment. However, local program administration naturally can result in variable enforcement decisions and responses. The ERR provides structure to the enforcement responses by CACs across the state through a violation classification and fine-setting procedure. The regulations became effective in November 2006 with full implementation in 2007.

In 2009, DPR evaluated the results of discussions with a CAC subcommittee and the Office of Environmental Health Hazard Assessment to improve the regulations related to CAC enforcement response and civil penalty actions by commissioners (Title 3, California Code of Regulations, sections

6128 and 6130). DPR drafted proposed regulatory changes for review and consideration by the Directorate. DPR anticipates placing the ERR regulatory amendments into rulemaking during late-2010.

Volatile Organic Compounds (VOC) and Field Fumigants: Under the federal Clean Air Act, California must meet national standards for airborne pollutants and specify how it will achieve these goals in a federally approved State Implementation Plan (SIP). Under the U.S. EPA approved 1997 SIP, California is expected to reduce pesticide VOCs by 12 percent in the San Joaquin Valley non-attainment area (NAA) and 20 percent in the other four NAAs (Sacramento Metro, South Coast, Southeast Desert, and Ventura) compared to 1990 levels.

To achieve these goals, DPR adopted regulations in 2008 limiting VOC emissions from fumigants. The regulations reduce VOC emissions in five non-attainment areas that do not meet federal air quality standards for ozone by limiting fumigant application methods and requiring a cap-and-allowance system in the Ventura NAA to manage emission reductions. The regulations also set up an allowance system that would be triggered in other NAAs if application restrictions did not result in targeted reductions. In addition, an evaluation on compliance with the allowances and requirements is reported annually.

Since 2008, growers in Ventura County have submitted requests to apply fumigants to the Ventura CAC. These requests were reviewed by DPR staff who issued proportionately reduced allowances to meet target emission reduction goals. The Ventura CAC, working with their growers, tracked, and monitored the use of lower-emitting application methods and practices required by the regulations.

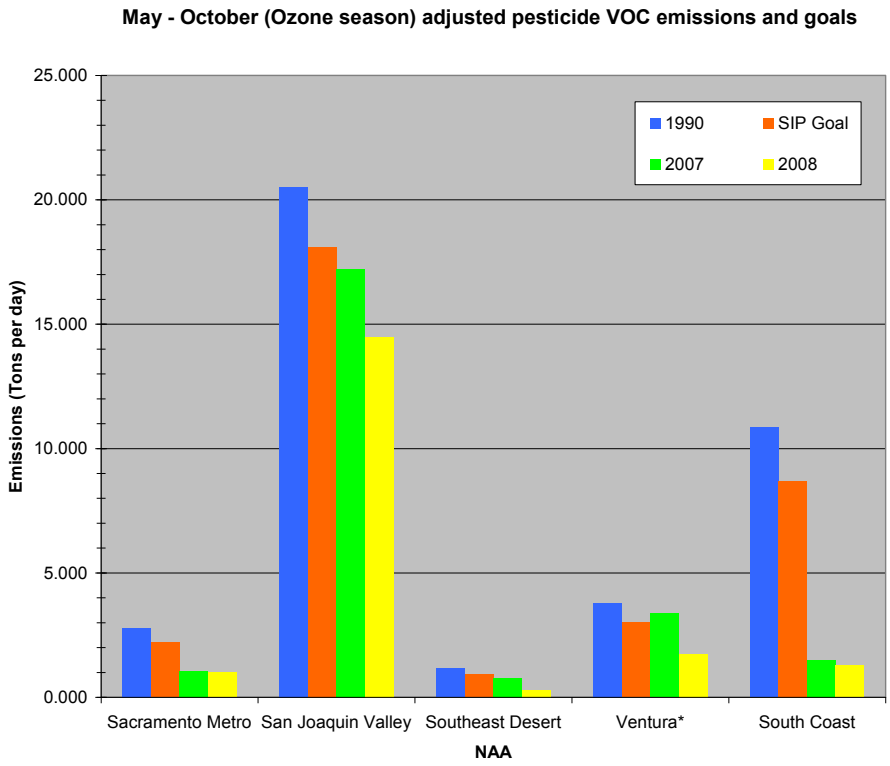
In 2009, DPR received field fumigant emissions allowance requests for 2,355,233 pounds of VOCs for the Ventura NAA. DPR established a fumigant limit of 1,325,000 pounds total for the May-October 2009 season based on estimated 2007 non-fumigant emissions. The requests were proportionally reduced by approximately 56.26 percent.

Growers in the five NAAs were required by the regulations to report the specific field fumigation method on the pesticide use reports (PUR) that they submit to the CAC. This information, along with other pesticide use data for non-fumigant applications, allows DPR to compute the total yearly VOC emissions for each area.

In 2009, DPR analyzed 2008 pesticide use report data to evaluate compliance with the allowances and requirements to use low emission methods. DPR released the results in its Annual Report on Volatile Organic Chemical Emissions from Pesticides. This comprehensive report is available on our website at http://www.cdpr.ca.gov/docs/emon/vocs/vocproj/2008annual_rpt.pdf.

Three of the five NAAs were required to use only low emission methods to reduce VOC levels. Use of low emission methods in the Sacramento Metro and South Coast NAAs is voluntary since emissions have been far below the SIP goals for several years. VOC emissions from pesticides used in 2008 dropped significantly in the three NAAs required to use only the low emission methods:

- San Joaquin Valley - declined by 30 percent from 1990 levels.
- Ventura County - declined by 54 percent from 1990 levels and 58 percent from 2007 levels.
- Southeast Desert - declined by 75 percent from 1990 levels and 79 percent from 2007 levels.



VOC emissions in the other two NAAs continued to decline as they have since the SIP goals were established in 1997.

The 2008 VOC regulations included requirements that pest control businesses performing field soil fumigations meet licensing requirements by having a responsible qualified person certified through examination to perform or supervise field fumigations. These responsible persons must possess a valid qualified applicator license in the field soil fumigation pest control category. In addition, other employees who handle fumigants could become certified through examination to possess a qualified applicator certificate in the field soil fumigation pest control category.

To ensure the competency of the individuals, DPR undertook a comprehensive project that included the development of core competencies, study materials, examinations, and continuing education requirements for the license/certificate. DPR implemented the certification examinations in January 2009 with 500 individuals passing either the qualified applicator license (371) or the qualified applicator certificate (129) examination.

More detailed information about DPR's program and ongoing efforts to improve air quality in the state by controlling the use of smog-producing pesticides is available on the DPR website at http://www.cdpr.ca.gov/docs/emon/airinit/airmenu.htm.

Inspection Procedures: The Enforcement Branch completed a two-year effort to modify and upgrade the inspection program used by both DPR and CAC staff. The project involved revising the forms used in 22 types of inspections that evaluate compliance with pesticide use laws and regulations. Modifications to the inspection forms focused on aligning the inspection criteria (i.e., each requirement observed and evaluated during an inspection) with current statutory and regulatory requirements. Laws and

regulations no longer "on the books" were removed and new ones were added to the forms. The project also required extensive modifications to *Volume 4 (Inspection Procedures)* of the *Pesticide Use Enforcement Program Standards Compendium*, as well as training both DPR and CAC staff in the evaluation of the new criteria.

The final component of the project involved extensive modifications to the inspection tracking database system that DPR uses to capture, track and analyze compliance. Final conversion to the new database system took place during the first quarter of 2010.

Because of the conversion to a new inspection program, DPR cannot directly correlate compliance rates for 2009 with prior years. DPR anticipates that in the 2010 report, it will report only two years (2009 and 2010) and then move forward with multiple-year assessments using the new inspection tracking database system.

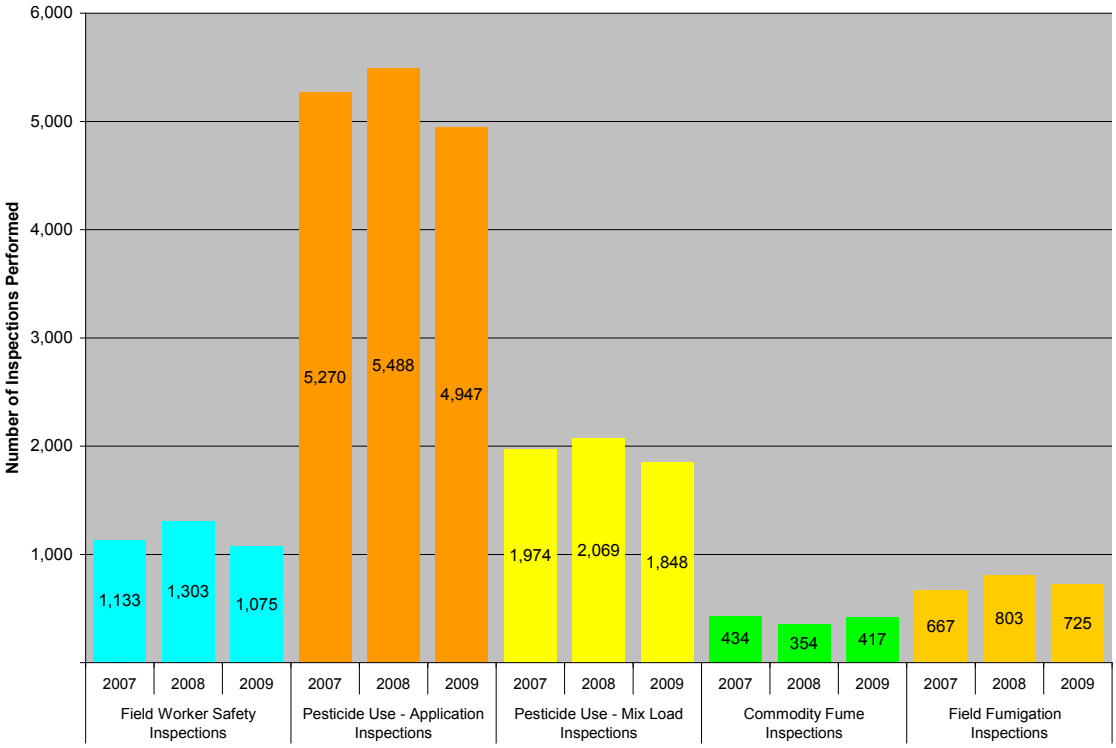
B) What the Reported Data Tells Us

DPR collects significant amounts of data on its activities, as well as those of the CACs and their staffs. The two enforcement-related data sources include the inspection tracking and enforcement action databases.

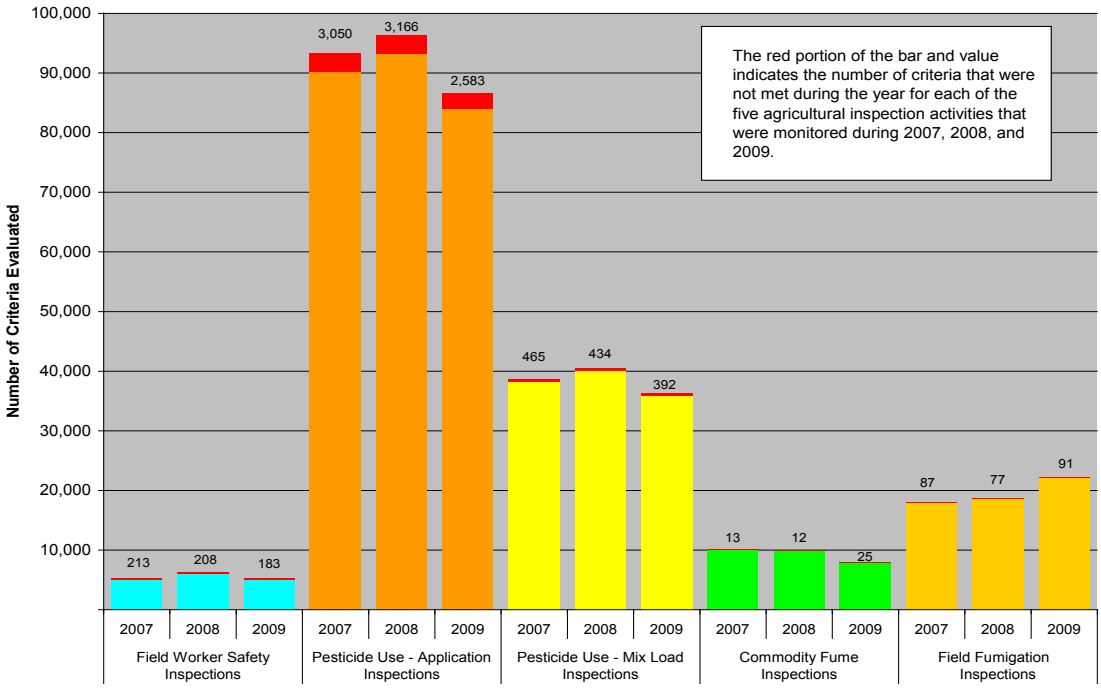
The inspection tracking database collects information on approximately 17,500 inspections conducted by the counties in both agricultural and non-agricultural (including structural) pesticide use settings, and compliance rates with their respective laws and regulations. Information in this database includes the number and type of inspections, the sections of laws and regulations that were the subject of the inspections, and the compliance rates for each item.

The following charts represent inspections and compliance rates in agricultural and structural pesticide use inspections conducted annually by the CACs for 2007, 2008 and 2009. "Criteria evaluated" represents the number of times a particular category of mandated human health and environmental statute or regulation is inspected and evaluated for compliance with laws and regulations. The most common violations across all agricultural inspections and all structural inspections are summarized separately for 2007, 2008 and 2009.

County Agricultural Inspections Performed In 2007, 2008, and 2009



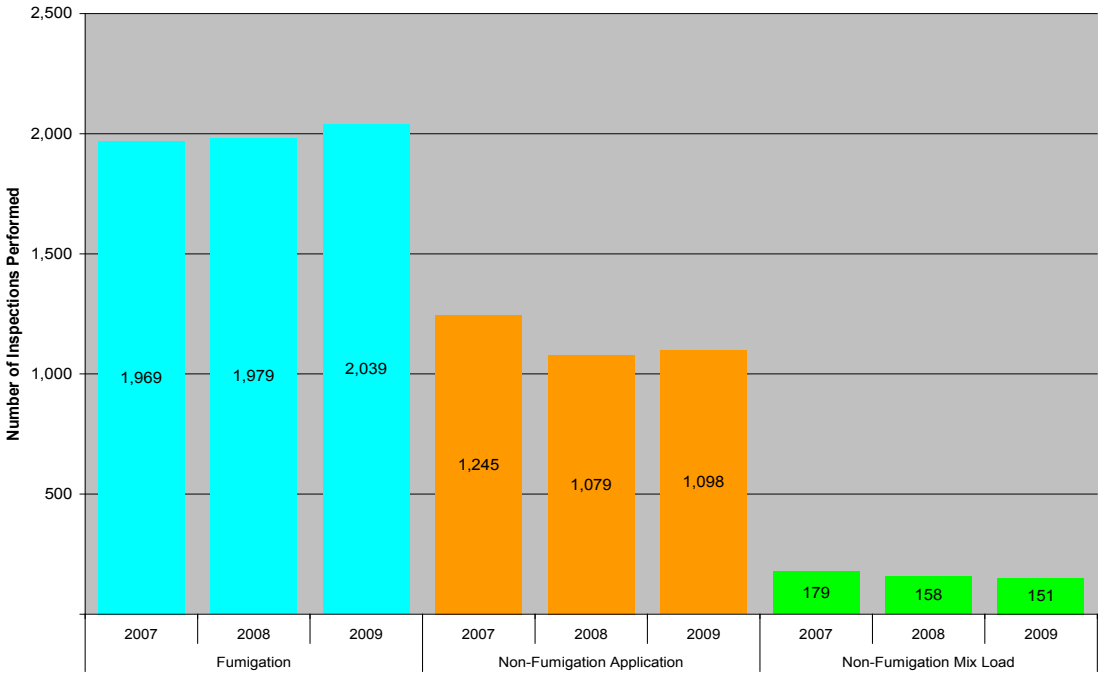
County Agricultural Criteria Evaluated In 2007, 2008, and 2009



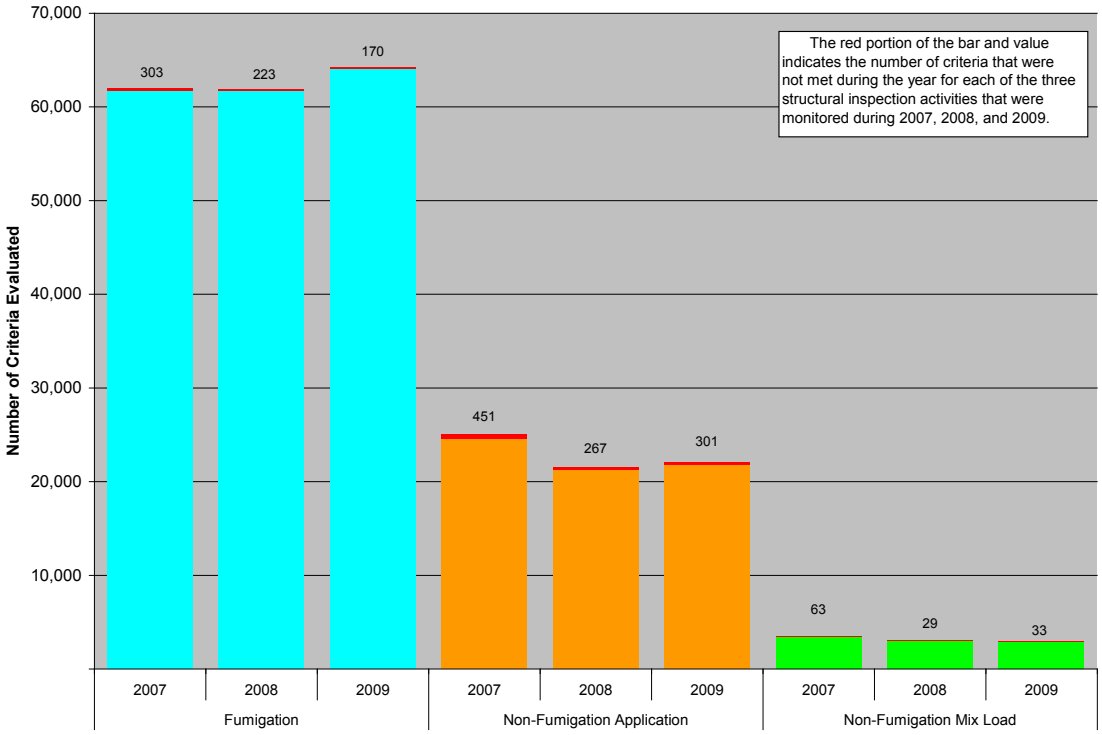
Most Common Pesticide Use Violations in Agricultural Inspections

Elements Evaluated	Number of Violations		
	2007	2008	2009
Personal Protective Equipment	688	678	504
Handler Training	605	628	617
Labeling - Permit Conditions	587	604	499
Emergency Medical Care/Handler	458	439	369
Handler Decontamination Facilities	357	324	242
PCB/Equip Registered	326	356	314
Service Container Labeling	292	308	258
Availability of Labeling	254	290	209
Hazard Communication – Fieldworkers	153	156	183
Equipment Identification	144	136	111
Hazard Communication for Handlers	134	126	128
Pesticide Use Reports Submitted	115	111	103
Pesticide Use Records	108	127	91
Container Requirements	103	115	107

County Structural Inspections Performed In 2007, 2008, and 2009



County Structural Criteria Evaluated In 2007, 2008, and 2009



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Most Common Pesticide Use Violations in Structural Inspections

Elements Evaluated	Number of Violations		
	2007	2008	2009
Personal Protective Equipment	198	124	115
Labeling - Permit Conditions	174	96	106
Emergency Medical Care/Handler	108	64	46
Service Container Labeling	83	61	62
Handler Training	80	68	59
Written Notice to Occupant	47	60	82
General Fumigation Safe-Use	44	29	14
Availability of Labeling	35	21	16
General Standards of Care	34	29	19
Container Control	32	10	15
Annual Notification Submitted	27	32	36
Hazard Communication for Handlers	22	13	12
Standards & Records	19	29	13
Pesticide Use Reports	19	13	22
Fumigation of Enclosed Spaces	15	10	6

The enforcement tracking system collects information on enforcement actions taken by the counties and includes the sections of laws and regulations violated and the fine amounts assessed. Information in this database includes the person or firm cited, date of violation(s), section(s) violated, type of enforcement action taken, pesticide(s) involved, date of action, date case closed, proposed fine(s), and final fine(s). This database is useful in determining repeat violators within a county and to determine if there are regional patterns for specific individuals or businesses.

C) How DPR Uses This Information

The data provide basic information used in the development and assessment of (a) DPR's annual work plan and reports to USEPA and (b) county pesticide enforcement work plans and evaluations. The Enforcement Branch determines and sets performance goals in its operational planning process based on an analysis of the previous year's data. Evaluation of data may be used to modify or change performance goals for both DPR and the counties.

The county pesticide regulatory activity workload data are used as one basis for funding a portion of county pesticide activities. (Other funding sources for county pesticide enforcement programs include county general funds and unclaimed gas tax.) The data also help measure a county's annual performance, e.g., did it meet the workload goals of its annual work plan.

Managers and staff at DPR review inspection and enforcement data to assess the strengths and weaknesses of our program. The data measure the effectiveness of new policies and procedures. A recent example is the new enforcement response regulations. DPR and the CACs are actively reviewing enforcement metrics, inspection data, and actions taken to gauge the effectiveness of the regulations to establish a higher uniform level of enforcement and impact on compliance and recidivism. This review

will also assess the impact of the regulations on county workload. It is anticipated that changes to one or more of the above data systems will be necessary to capture changing workload and performance measures.

During the second quarter of 2008, DPR provided USEPA with four years of inspection data including a summary of the numbers and types of non-compliances found and the enforcement actions taken during the same period. USEPA completed its initial assessment of the impacts and effectiveness of the enforcement response regulations relating to worker protection during 2009. DPR reviewed the draft reports and provided comments back to USEPA for inclusion in its final report.

The Enforcement Branch collects and analyzes data available through DPR and other sources for its suitability and restrictions for developing enforcement metrics on a statewide, regional, and local basis. Information and analyses are shared throughout DPR to address worker protection, integrated pest management, water quality, air quality (contributions to smog and ozone depletion), and endangered species protection. In conjunction with DPR management, the Enforcement Branch:

- Identifies activities with high levels of non-compliance that pose a high risk of causing environmental harm.
- Identifies activities or entities with the highest incidences of non-compliances.
- Identifies chronic or recalcitrant violators (local, regional or statewide).
- Identifies local, regional and statewide violation patterns.
- Identifies correlations between areas of greatest non-compliance.
- Sets realistic goals for incorporation into DPR activities and county work plans, and develops methodologies to measure progress.
- Develops additional environmental indicators.

II. DPR'S ENFORCEMENT PROGRAM

A) Overview

Mission Statement

DPR's mission is to protect human health and the environment by regulating pesticide sales and use, and by fostering reduced–risk pest management.

Organizational Structure

The size and diversity of California agriculture dictate a much more complex partnership between federal, state and local pesticide regulatory authorities than anywhere else in the nation in part because the county-based regulatory structure predated both the state or federal regulatory structure.

DPR oversees a multi-tiered enforcement program. The USEPA promulgates federal regulations covering minimum pesticide requirements that are enforced at the state and local (county) levels through cooperative agreements. Over the years, the California Legislature has passed more stringent laws covering registration; licensing of entities applying, using, or recommending pesticides; and the evaluation and use of pesticides to protect the environment, the public and worker health.

DPR has primary responsibility to enforce pesticide laws and regulations in California. Enforcing pesticide use laws and regulations is a joint responsibility of the DPR and the CACs who administer pesticide use enforcement on the local level. California Food and Agricultural Code (FAC) section 2281 outlines respective responsibility for enforcement of the pesticide laws and regulations.

The Budget Action of 2009/2010 transferred the Structural Pest Control Board (SPCB) from the Department of Consumer Affairs to DPR effective July 2009. The SPCB administers licensing of structural pest control businesses and structural applicators. Food and Agricultural Code section 15201.1 outlines general responsibilities and roles for DPR, SPCB, and the CACs in licensing and pesticide use for structural pest control activities. It specifies that the CACs regulate pesticide use in structural activities under the direction and supervision of DPR.

The Department of Public Health (DPH) oversees the activities of local vector control (public health/ mosquito abatement) agencies. DPR, DPH, and the CACs are parties to a memorandum of understanding that outlines responsibilities and coordination relating to vector control activities. It addresses pesticide availability, applicator certification, pesticide use report, and episode reporting.

DPR, USEPA Region 9, and the CACs are parties to a cooperative agreement that ensures a unified and coordinated program of pesticide episode reporting, investigation, and enforcement action in California.

Additionally, DPR has an agreement with the U.S.Department of Agriculture (USDA) to sample food commodities for the USDA Food Safety Program for both pesticide residues and microbial pests (e-coli, salmonella, etc.).

DPR's Enforcement Branch

The Enforcement Branch:

- Has overall responsibility for all pesticide use enforcement activities of the CACs, providing training coordination, oversight and technical support to roughly 280 county agricultural biologists involved in the local enforcement programs.
- Has oversight responsibility for pesticide incident investigations.
- Administers the nation's largest state monitoring program for pesticide residues on domestic and imported produce.
- Inspects for compliance with pesticide product registration and labeling requirements.

The Enforcement Branch is comprised of headquarters and three regional offices located in Anaheim, Fresno, and West Sacramento. Headquarters staff develop policies and procedures; direct and manage the department's food safety program; review and make recommendations for product use practices before registration, including alternatives and mitigation measures; interpret pesticide labels for compliance with state and federal statutes; analyze, propose and/or develop legislation and regulation; compile and analyze statewide data for use in developing and modifying existing pesticide environmental regulations (air, ground, endangered species), worker protection and food safety programs; and coordinate the structural pest control program with the CACs and the SPCB.

The Enforcement Branch's three regional offices work with CAC staff to plan and prioritize pesticide compliance and use enforcement activities. DPR assigns each regional office to work with specific counties. A senior-level staff member from the regional office, known as an enforcement branch liaison, is assigned to each CAC.

Product Compliance and Enforcement

The Product Compliance Branch receives the Enforcement Branch staff's inspections that find violations of registration and labeling requirements. In combination with information generated through its audits, complaints, and review of internet Web sites, the Product Compliance Branch forwards cases involving the unregistered and misbranded product sales to DPR's Office of Legal Affairs. It also audits pesticide

sellers to assure the appropriate statutory fee on their sales has been paid. The focus of the product compliance program is two-fold:

- Protection of the environment and public health by enforcing registration requirements that assure that pesticide products are evaluated for efficacy and safety, and labeled with the appropriate instructions and precautions, and
- Assuring fiscal support of our regulatory programs by enforcing the payment of the required fee based upon the volume of sales into California.

All pesticide products must be registered before they can be sold in California. The registration process requires an evaluation to ensure the product can be used safely under California conditions. Before registration, DPR scientific and technical staffs review data on the product to ensure that it is properly labeled and will not cause health or environmental problems. Unregistered products, sometimes sold over the internet or by mail, have not undergone this scrutiny and may pose unrecognized hazards to health or the environment.

DPR's Product Compliance Branch conducts audits of pesticide sellers throughout the U.S. to determine proper registration, verify sales, and document payment of mill assessment fees. To ensure that products in the channels of trade are in compliance with state and federal pesticide laws, the Enforcement Branch inspects products offered for sale at retail and wholesale nurseries, hardware, home and garden centers, landscape material suppliers; agricultural chemical dealers; feed, farm, and pet suppliers; industrial and institutional vendors; restaurant and hospital suppliers; grocery and drug stores; pool and spa centers; and other sites where pesticides are sold. In 2009, about 33 percent of the inspections revealed violations.

The Product Compliance Branch takes the lead when violations of sales, labeling, or registration are found by directing investigations, collecting evidence, and documenting findings to substantiate the violations. The Product Compliance Branch coordinates with DPR's Legal Office to develop and propose appropriate enforcement actions, including settle agreements. Most violations are resolved by the collection of civil penalties resulting from a settlement agreement between DPR and the pesticide seller.

County Agricultural Commissioners Pesticide Use Enforcement

California's pesticide enforcement program stands apart from those of the other states in that there are CACs in all 58 counties. Other states have inspectors employed by the state lead pesticide agency who conduct all pesticide inspections statewide.

CACs enforce federal and state pesticide laws and regulations at the local level. CACs issue site-specific local permits for the use of restricted materials, conduct on-site application inspections, administer full pesticide use reporting, conduct worker safety inspections, and investigate pesticide illnesses and incidents.

CAC staff inspect the operations and records of growers, pest control applicators, pest control dealers, and agricultural pest control advisers. They also certify private applicators and issue restricted material permits. In addition, CAC staff train pesticide users, conduct pesticide episode/priority investigations, and conduct fieldwork and pesticide handler inspections to assure compliance with worker protection standards and other pesticide use requirements. Fiscal-year summaries of county workload can be found in the California Pesticide Regulatory Activities Monthly Report (PRAMR) online at: www.cdpr.ca.gov/docs/enforce/report5.htm.

B) DPR Enforcement Program Components

1) Oversight of Counties and County Activities

California law designates DPR as the agency responsible for delivering an effective statewide pesticide regulatory program. However, the Legislature delegated local administration of the pesticide use enforcement program to the CACs, governed by the instructions and recommendations of the DPR. The success of the ***statewide*** use enforcement program therefore depends on DPR oversight and guidance and the CACs efforts to implement an effective program. DPR uses its statewide authority to oversee, evaluate, and improve the CACs' use enforcement programs. DPR assists the CACs in the planning and development of adequate county programs; evaluates the effectiveness of the local programs; and assures corrective actions are taken in areas needing improvement.

The goal of DPR's enforcement program and the CACs is to protect public health, property, pesticide handlers and fieldworkers, and the environment of California. We strive for consistent enforcement across all 58 counties of the pesticide laws and regulations. DPR and CACs strive to meet these goals by following the enforcement response regulations, as well as creating work plans with directed priorities.

Enforcement branch liaisons are located in DPR's three regional offices (Sacramento, Fresno and Anaheim) and serve as the primary contact point between CACs and DPR. Each liaison is assigned to specific counties and works with CACs and staff to develop and revise annual county work plans, provide direction and/or assist in county investigations, consult on appropriateness of proposed enforcement actions (strength of evidence, proper classification of the violation and fines), provide training and outreach, as well as interpret label and regulatory requirements. Liaisons assess the effectiveness of CAC's overall pesticide enforcement program by conducting side-by-side inspections with county staff; reviewing restricted material permits and notices of intent; reviewing CAC inspections and investigative reports, and making recommendations for additional investigation or data; and reviewing compliance and enforcement actions. Liaisons track incident investigations and complaints, and assist in the development of cases involving licensees, which may lead to a possible license suspension or revocation by the state.

Annual County Work Plans and Evaluations: As part of an organization-wide effort to incorporate continuous quality improvement into California's pesticide enforcement program, DPR and the CACs developed a cycle that includes state and local program review, planning, implementation, and evaluation. DPR's guidance represents a simplified approach in targeting core enforcement program priorities and evaluating the effectiveness of county programs. In turn, county work plans identify state, regional, and local compliance problems, emerging issues, and measurable solutions based on available resources. DPR uses jointly developed performance standards to evaluate the effectiveness of the county's enforcement program.

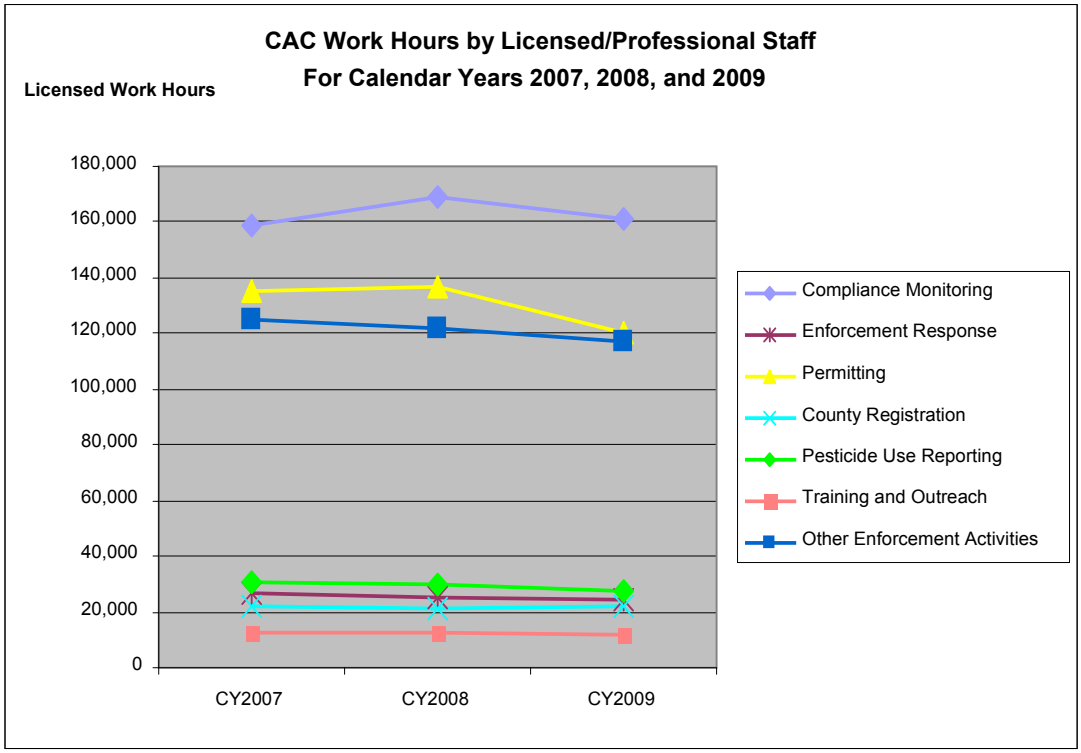
DPR's three regional offices help CACs develop annual work plans that detail each county's priorities in improving enforcement, compliance and permitting. The work plans have clearly stated goals and performance measures, balancing DPR's statewide enforcement priorities with local conditions unique to each county. DPR regional staff also evaluate CAC performance, using objective-based performance measures that examine how well counties are targeting local problems and patterns of continuing violations. Work plans and evaluations, by county, can be downloaded at: www.cdpr.ca.gov/docs/county/enf_stat_profile.htm.

In 2009, DPR was forced to forego formal written county evaluations to deal with reduced work hours resulting from furloughs. Regional office staff continued to consult and evaluate county performance and where necessary, recommend actions to correct or improve county regulatory performance. This decision will be reevaluated in 2010/2011.

DPR also encouraged counties to prepare multi-year work plans for 2009 and future years to deal with reduced staffing and work hours resulting from ongoing budget cutbacks at the local level. This situation, along with state and county general fund cutbacks, caused many counties to reprioritize work activities in order to address those issues that would most adversely affect the economic and environmental issues facing their counties, including new exotic pest pressures such as the Asian citrus psyllid and the European grapevine moth, water shortages, and reductions in planted acreage.

The 2009 statistics, illustrated in the next two charts, bear out these staffing and workload reductions. The majority of the decreases are reflected in the "permitting" category with declines in the number of notices of intent reviewed and pre-site evaluations (field inspections prior to application). These workload activities most likely directly correlate to acreage taken out of production to deal with water shortages.

Counties also reduced routine inspections, training and outreach, and other non-critical or non-essential workload to meet their budgetary challenges and programmatic priorities.



Summary of County Statewide Workload Statistics

Preliminary CAC Reported Workload Statistics - Inputs	2007	2008	2009
CAC Licensed Staff Hours	511,000	517,000	488,000
CAC Support Staff Hours	158,400	153,200	140,000
Preliminary CAC Reported Workload Statistics – Outputs			
Restricted Materials Permitting			
Restricted Material Permits Issued/Amended	38,800	40,000	43,400
Permits Denied	440	410	380
Notices of Intent to Apply a Restricted Material Reviewed	155,400	145,000	140,500
Notices of Intents Denied	1,600	1,700	1,200
Pre-Site Application Evaluations/Inspections	9,700	9,600	8,140
Compliance Monitoring			
Inspections*			
Agricultural Use	7,240	7,560	6,790
Field Worker Safety	1,130	1,300	1,080
Commodity Fumigation	430	350	420
Field Fumigation	670	800	730
Records Inspections	5,370	5,570	5,240
Structural Fumigation	1,970	1,980	2,040
Structural Non-Fumigation	1,420	1,940	1,250
Investigations	1,600	1,600	1,600
Enforcement Response			
CAC Compliance Actions	4,200	3,900	4,200
CAC Enforcement Actions			
Number of Enforcement Cases Closed	1,300	1,000	875
Amount of Civil Penalties Assessed	$613,800	$437,400	$335,100
Number of Cases Referred to District Attorney	2	2	3
Compliance Assistance			
Training & Outreach Sessions	1,300	1,500	1,200
Number of Persons Attending	40,600	40,000	42,000
County Registrations & Certification			
Operator Ids for Non-Restricted Use Issued/Amended	13,000	13,500	13.500
Private Applicator Certificates Issued	6,500	5,700	6,000
Pest Control Business/Advisers/Pilots Registered	12,100	11,900	12,800
Farm Labor Contractor Registered	2,200	2,500	2,900
Structural Pest Control Business Registered	5,700	6,300	7,500
Preliminary CAC Reported Workload Statistics - Outcomes			
Total Inspections Conducted	18,240	18,810	17,540
Inspections with 1 or More Violations	2,570	2,514	2,219
Inspections with 100% Compliance Rate	86%	87%	87%
Total Number of Criteria Evaluated	330,170	335,860	319,290
Total Number of Criteria in Compliance	323,420	329,440	313,740
Compliance Rate for Criteria Inspected	98%	98%	98%

*County inspection data and compliance rates are from DPR's Inspection Tracking Database. Counties conduct additional inspections (follow-ups, partials, unattended tarp/aeration, etc.) that are not currently captured in DPR's database; thus compliance rates and specific inspection elements cannot be evaluated for these inspections.

As noted earlier, DPR does not track its workload (resources, outputs and outcomes) on a calendar year basis. DPR fiscal year program metrics are available on its website at http://www.cdpr.ca.gov/docs/dept/planning/performance/index.htm.

County enforcement statistics, work plans and evaluations are posted on DPR's website at: www.cdpr.ca.gov/docs/county/enf_stat_profile.htm.

2) Food Safety

DPR's Food Safety Program monitors compliance with pesticide laws to ensure that all food meets pesticide safety standards. Sampling and laboratory analysis serve to detect each of the two categories of illegal residues: (1) pesticide residues that exceed established tolerance levels, and (2) residues of pesticides for which no tolerance has been established for a specific crop. When illegal residues are found, DPR reacts immediately by removing the illegal produce from sale, and then verifies that the produce is either destroyed or returned to its source. In addition, if the owner has similar produce from the same source, DPR quarantines that produce until the laboratory verifies that it is free from illegal residues. Further, DPR traces the distribution of the illegal produce by contacting distributors throughout California, imposing additional quarantines and conducting additional sampling as needed.

DPR administers the state-mandated *Pesticide Residue Surveillance Program* that involves produce sampling and data collection activities. DPR's Program is the most extensive state residue-monitoring program in the nation. It is the final check in an integrated network of programs designed to ensure the safe use of pesticides in California.

DPR Enforcement staff samples individual lots of domestically produced and imported foods and delivers them to a California Department of Food and Agriculture (CDFA) laboratory where they are tested to determine compliance with USEPA approved tolerances. Routine samples are analyzed for more than 200 pesticides and breakdown products. In addition, selected samples receive specific analysis for non-screenable pesticides of dietary and enforcement concern. Samples are collected throughout the channels of trade -- packing sites and wholesale and retail markets. DPR and CACs investigate every incident of illegal residue detected in the residue-monitoring program for California grown produce. After the detections of over-tolerance and no-tolerance-established residues, DPR takes actions such as issuing stop sales and crop destruct orders.

Another component of our Food Safety Program is our participation in USDA's Pesticide Data Program (PDP) and Microbiological Data Programs (MDP). It should be noted that USDA does not report back to the states the analytical results on residue findings for each sample collected, but publishes annual reports which are available on the USDA website.

PDP: USDA started PDP in 1991 to test commodities in the U.S. food supply for pesticide residues. PDP tests for over 290 pesticides in over 50 different food commodities. This program maintains an electronic database that serves as a central data repository. USDA prepares annual summaries of the PDP data that are publicly available on the Internet. The summaries provide data on pesticide dietary exposure, food consumption, and pesticide use. PDP data are used by the USEPA to make realistic assessments of dietary pesticide risk and for the ongoing review of pesticide tolerances. Besides USEPA, the U.S. Food and Drug Administration (US FDA), academic institutions, food producers, chemical manufacturers and environmental groups use PDP data. PDP data are statistically representative of the overall residue situation for a particular pesticide, commodity, or place of origin.

MDP: The goal of the MDP Program is to provide data on the presence of foodborne pathogens and indicator bacteria on fresh fruit, vegetables, and more recently, fish. MDP currently tests for six microorganisms: generic E. coli, shiga toxin producing E.coli (STEC), enterotoxigenic E.coli (ETEC), E.coli 0157:H7, Salmonella, and Shigella.

Food Safety - Samples Collected - Outputs	**2007**	**2008**	**2009**
Number of State Residue Program Samples Collected	3,562	3,483	3,429
Number of USDA – PDP Samples Collected	2,632	2,708	2,447
Number of USDA – MDP Samples Collected	420	724	1,170
Food Safety – State Residue Sample Analyses Results - Outcomes			
Number of Samples with No Residues Detected	2,230	2,444	2,517
Number of Samples with Residues within Legal Tolerances	1,290	999	830
Number of Samples with Illegal Residues	45	40	82

3) Registration, Licensing, and Product Compliance

As stated earlier, DPR's mission is to protect human health and the environment by regulating pesticide sales and use and by fostering reduced-risk pest management. Three major components of DPR's multi-pronged approach include product registration, licensing of individuals and businesses that perform or supervise pest control activities, and surveillance of products sold in the marketplace to ensure they are registered and meet California's health, environmental, and safety standards.

Product Registration: Before pesticides can be sold or used in California, they must be registered both by USEPA and by DPR. Scientists in both organizations evaluate the safety and potential environmental effects of products before they are registered. The California evaluation is focused on use under California conditions – whether in an agricultural field or an urban setting. Before registration, DPR scientific staff (toxicologists, biologists, entomologists, plant physiologists, and chemists) reviews data on the product to ensure that it is properly labeled and will not cause health or environmental problems. DPR scientists review data to determine a product's potential to cause human health problems; how it behaves in the environment; its effectiveness against targeted pests (efficacy); how it breaks down in the environment and its potential to contaminate soil, water, and air; its effects on fish and wildlife; and the degree of worker exposure resulting from its labeled use.

Unregistered products – sometimes sold over the Internet or by mail order – have not undergone this kind of scrutiny and may pose unrecognized hazards to health or the environment.

Licensing and Certification: To ensure that pesticides are handled and used according to state and federal laws and label directions, any individual who recommends, uses or supervises the use of a pesticide must meet strict education requirements and take and pass examinations covering the type of pest control work they perform prior to being issued a license or certificate by DPR. These individuals include applicators, aircraft pilots, pest control advisers, and pest control dealer agents.

In addition, to maintain and renew their licenses or certificates, these individuals must take continuing education (CE) to ensure they are knowledgeable of current pesticide laws and regulations; the proper, safe and efficient use of pesticides; protection of the public health, environment and property; and safe working conditions for agricultural and pest control workers. To ensure the availability of quality CE courses, DPR reviews and approves all CE instructional opportunities including college levels courses; demonstrations or presentations of current applied research; professional or technical seminars;

demonstrations related to pesticides or pest management; and field trial tours. Continuing education sponsors must submit course outlines/agendas and descriptions to DPR for review and approval prior to the course date. DPR also randomly audits approved CE courses as a tool to provide course sponsors with feedback so they can make improvements to future courses. Audits are also used to verify attendance and CE hours claimed by course attendees and evaluate the quality of DPR/s CE program.

Pest control businesses (including maintenance gardeners), dealers, and brokers must also obtain licenses with periodic renewals and show proof that they continue to meet insurance obligations and retain qualified persons on staff.

DPR administers examinations, issues new and renews licenses or certifications, and reviews and approves CE courses in the following categories:

DPR Licensing and Registration - Outputs	2007	2008	2009
Number of Registered Products	11,940	11,700	12,200
Number of Pesticide Registrants	1,330	1,340	1,360
New Licenses and Certificates Issued	1,720	2,530	2,850
Renewed Licenses and Certificates Issued	12,500	10,640	13,631
Exams Administered By DPR	9,100	9,050	11.010
Continuing Education Courses Accredited	1,679	1,741	1,571

Product Compliance: DPR's Product Compliance Branch staff and the Enforcement Branch staffs jointly carry out pesticide product compliance activities. To ensure that products used in California are registered and approved by USEPA and DPR, Enforcement field staff performs inspection and compliance activities under both a State-mandated program and as part of DPR's consolidated cooperative agreement with USEPA. Under the current pesticide product compliance program, DPR inspectors conduct approximately 350 inspections at manufacturing facilities and business throughout the state. When staff uncovers sales of unregistered pesticide products, the Product Compliance Branch initiates investigations and cases are sent to the Office of Legal Affairs that obtains administrative penalties through settlements or enforcement actions.

Mill fees must be paid on all pesticide sales, including agricultural and non-agricultural products. This includes not only insecticides and herbicides, but also many products not generally thought of as pesticides, including sanitizers, disinfectants, mildew removers, pool chemicals, and insect repellants. Ensuring that all pesticide sellers pay the required mill fee makes the marketplace a level playing field for all pesticide sellers -- assuring that those who comply are not operating at a disadvantage to those who do not. The Product Compliance Branch conducts investigations and audits to identify pesticide sellers who are not paying or are underpaying mill fees. Sellers must pay any money due and a penalty, and may be subject to administrative or civil penalties.

DPR conducts inspections and investigations to ensure compliance with product registration and mill assessment reporting (funds collected based on sales of product into California). The following is a summary of these preliminary statistics:

DPR State Product Compliance Activities – Outputs	2007	2008	2009
Number of Product Compliance Inspections Conducted	290	294	264
Number of Product Compliance Audits Completed	49	67	80
Number of Cases Pursued by the Office of Legal Affairs	130	182	127
DPR State Product Compliance Activities – Outcomes			
Cases Forwarded to EPA for Action	79	74	55
Number of Findings of Unregistered Products	535	583	471
Number of Cases Settled by DPR	117	94	99
Penalties Collected by DPR	$1,776,293	$1,416,191	$1,118,445

4) Agricultural Pest Control and Pesticide Use Reporting (PUR)

California's pesticide use reporting program is recognized as the most comprehensive in the world. Limited use reporting requirements have been in force since at least 1950. However, these requirements were substantially changed in response to demands for more realistic and comprehensive pesticide use data for estimating dietary risk, exposure and potential risk to workers. In 1990, California became the first state to require full reporting of agricultural pesticide. Under the program, all agricultural pesticide use must be reported monthly to the county agricultural commissioner who, in turn, reports the data to DPR.

California has a broad legal definition of "agricultural use" so the reporting requirements include pesticide applications to parks, golf courses, cemeteries, rangeland, pastures, and along roadside and railroad rights of way. In addition, all post-harvest pesticide treatment of agricultural commodities must be reported, along with all pesticide treatment in poultry and fish production, as well as some livestock applications.

Structural pest control operators, professional gardeners, and other nonagricultural pest control operators continue to report all pesticide use as they did under the earlier regulations. The primary exceptions to the full use reporting program requirements are home-and-garden use and most industrial and institutional uses.

DPR staff scientists use pesticide use data in developing dietary risk assessments; assessing potential groundwater contamination from the use of specific pesticides; determining VOC emissions; and assessing impacts on endangered species. DPR also uses the data to analyze how, when and where pesticides are used on different crops. Reduced-risk pest management alternatives can then be developed considering the different regions of the state and commodities grown in these regions.

The pesticide use data can also be correlated with inspection data to assess if inspections are adequate during periods of high use, or if an adequate number of inspections are being conducted during the peak use period of products of particular concern.

Site-specific use report data, combined with geographic data on sensitive sites including schools, farm labor camps, urban areas, water bodies (streams, lakes, rivers), and endangered species habitats, help CACs resolve potential pesticide use conflicts. Other government agencies, researchers, environmental advocates, and public interest groups use the PUR data extensively in carrying out their programs.

Annual statewide and county specific pesticide use data summaries by commodity and by pesticide dating back to 1989 can be obtained from DPR's website at www.cdpr.ca.gov/docs/pur/purmain.htm.

Queries against the PUR databases dating back to 1990 can be run from the California Pesticide Information Portal website at www.cdpr.ca.gov/docs/pur/purmain.htm.

Agricultural Pesticide Use – Inputs	**2007**	**2008**	**2009**
Agricultural Pest Control Businesses	6,800	6,500	4,600
Agricultural Pest Control Operators, Advisers, & Pilots	24,000	23,500	24,200
Private Applicators	19,000	18,900	18,200
Property Operators (Restricted & Non-Restricted)[1]	29,400	28,200	27,800
Number of Agricultural Fields/Sites[1]	178,000	183,600	172,000
Agricultural Pesticide Use – Outputs			
Number of Production Agricultural Applications[2]	2,197,247	2,102,820	2,002,915
Pesticide Use – Outcomes			
Pounds of Pesticide Active Ingredients Used in Production Agriculture	157,562,264	149,374,218	146,798,918
All Other[3] Pesticide Use – Outputs	**2007**	**2008**	**2009**
Number of Other Applications	13,869,380	12,809,509	11,768,195
All Other Pesticide Use – Outcomes			
Pounds of Pesticide Active Ingredients Used – Other	15,202,409	14,463,584	11,723,549

[1]Statistics as reported in the annual pesticide use report database.

[2]Pesticide applications may contain one or more pesticide products (referred to as a tank mix) and each product may contain one or more active ingredients (chemicals). Also of note, California requires that spray adjuvants (including emulsifiers, spreaders and stickers) that enhance the efficacy of a pesticide be registered as a pesticide and reported. The number of pesticide use records reflects the number of each pesticide product reported. For example, if one application is composed of two products, the number of records would equal two, i.e., one for each product. Therefore, the number of pesticide applications made in California is approximately 25-50 percent less than the number of records indicated below.

[3]"All Other" applications include post-harvest commodity fumigations; landscape maintenance in parks, cemeteries, and golf courses; rights of way; and public health (vector control) pesticide applications. Under current regulatory requirements not all applications are reported (home use, indoor industrial and institutional), creating a data gap in the "total" figure.

The following chart displays detailed compliance and non-compliance (including number of violations) data from DPR's inspection tracking database on the number of inspections conducted by the CACs in 2007, 2008, and 2009 in the ***agricultural*** use setting. Each inspection type not only evaluates a particular category of mandated human health and environmental requirements, but also unique sections of laws and regulations pertaining to that specific inspection type.

Agricultural Inspection Type	CAC Inspections Conducted			Compliance Elements Inspected			
	Total Number	With Violations	100% Compliance	Compliant	Non-Compliant	Total Elements	Rate
Field Worker Safety							
2007	1,133	139	87.7%	5,088	213	5,301	96.0%
2008	1,303	144	88.9%	5,978	208	6,186	96.7%
2009	1,075	131	87.8%	4,962	183	5,145	96.4%
Pesticide Mix-Load							
2007	1,974	182	90.8%	38,168	465	38,633	98.8%
2008	2,069	185	91.1%	40,085	434	40,519	98.9%
2009	1,848	170	90.8%	35,861	392	36,253	98.9%
Pesticide Application							
2007	5,270	971	81.6%	90,180	3,050	93,230	96.7%
2008	5,488	1,018	81.5%	93,169	3,166	96,335	96.7%
2009	4,947	812	83.6%	84,054	2,583	86,637	97.0%
Commodity Fumigation							
2007	434	4	99.1%	9,945	12	9,957	99.9%
2008	354	8	97.7%	8,055	25	8,080	99.7%
2009	417	6	98.6%	9,579	7	9,586	99.9%
Field Fumigation							
2007	667	29	95.7%	18,609	77	18,686	99.6%
2008	803	43	94.6%	22,537	104	22,641	99.5%
2009	725	19	97.4%	20,531	30	20,561	99.9%
Records							
2007	4,130	687	83.4%	59,887	1,799	61,686	97.1%
2008	4,298	674	84.3%	61,357	1,713	63,070	97.3%
2009	4,017	631	84.3%	58,352	1,642	59,993	97.3%
Total Agricultural							
2007	13,608	2,012	85.2%	221,877	5,616	227,423	97.5%
2008	14,315	2,072	85.5%	231,181	5,650	231,831	97.6%
2009	13,029	1,769	86.4%	213,339	4,837	218,176	97.8%

5) Structural Pest Control and Pesticide Use Reporting

DPR has primary authority for enforcing pesticide use by structural pest control licensees, overseeing the CACs who administer the local enforcement program. The Structural Pest Control Board (SPCB) is responsible for licensing persons engaged in structural pest control work. DPR is signatory to a memorandum of understanding with the SPCB and CACASA to ensure a uniform and coordinated Structural Pest Control Enforcement Program. Commissioners' and SPCB's staff periodically perform similar enforcement activities such as business office and records inspections. When the SPCB encounters possible pesticide use violations, they refer those findings to the commissioner for follow-up investigation.

SPCB administers licensing of structural pest control applicators, field representatives, structural pest control operators, and registered companies; enforces licensing provisions; and ensures consumer protection.

The Budget Act of 2009/2010 transferred jurisdiction over the SPCB from the Department of Consumer Affairs to DPR. DPR worked with stakeholders and Board members to transition the Board and its authorities to DPR.

Four counties (Orange, Los Angeles, San Diego, and Santa Clara) participate in an expanded Structural Pest Control Enforcement Program. In 1993, representatives of the local structural pest control industry in Los Angeles and Orange counties requested their respective CACs to increase monitoring of the structural fumigation industry based on their awareness of substandard structural fumigations that were damaging the reputation of the local structural pest control industry.

To pay for the program, structural pest control companies (in participating counties) pay $5 per structural fumigation to the CAC. This increased funding partially offsets the cost of increased inspections and associated structural fumigation enforcement activities. These expanded activities are critical to gaining a higher level of compliance with pesticide laws and regulations that result from an increased presence of county inspectors in the field. This program helps to ensure the health and safety of workers, the public, and the environment.

In January 2008, Assembly Bill (AB) 1717 replaced the annual county notification requirements for structural pest control businesses and licensees with a county registration program. Importantly, this new law requires that 24-hour advance notice must be given to the CAC of all structural fumigations. Twenty-four hour notice of structural applications assist the CACs in locating fumigations to monitor and inspect.

Structural Pesticide Use – Inputs	**2007**	**2008**	**2009**
Structural Pest Control Businesses	5,700	6,200	7,400
Structural Pest Control Individual Licensees[1]	NA	21,000	NA
Structural Pesticide – Outputs			
Number of Structural Applications	9,287,549	9,302,088	8,428,369
Structural Pesticide Use – Outcomes			
Pounds of Pesticide Active Ingredients Used In/Around Structures	3,966,587	3,223,304	2,988,124

[1]Licensees include individuals who identify infestations or infections and make inspections; applicators who apply fumigants; and applicators who apply materials used in non-fumigant settings.

The following chart displays detailed compliance and non-compliance (including number of violations) data from DPR's inspection tracking database on the number of inspections conducted by the CACs in 2007, 2008, and 2009 in the ***structural*** use setting. Each inspection type not only evaluates a particular category of mandated human health and environmental requirements, but also unique sections of laws and regulations pertaining to that specific inspection type.

Structural Inspection Type	CAC Inspections Conducted			Compliance Elements Inspected			
	Total Number	With Violations	100% Compliance	Compliant	Non-Compliant	Total Elements	Rate
Fumigation							
2007	1,969	140	92.9%	61,685	303	61,988	99.5%
2008	1,979	119	94.0%	61,709	223	61,932	99.6%
2009	2,039	107	94.8%	64,082	170	64,252	99.7%
Non-Fumigation							
2007	1,424	258	81.9%	28,016	514	28,530	98.2%
2008	1,237	177	85.7%	24,288	296	24,584	98.8%
2009	1,249	204	83.7%	24,762	334	25,096	98.7%
Records							
2007	1,243	160	87.1%	11,841	316	12,157	97.4%
2008	1,276	146	88.6%	12,266	251	12,517	98.0%
2009	1,219	139	88.6%	11,553	212	11,765	98.2%
Total Structural							
2007	4,636	558	88.0%	101,542	1,133	102,675	98.9%
2008	4,492	442	90.2%	98,263	770	99,033	99.2%
2009	4,507	450	90.0%	100,397	716	101,113	99.3%

6) USEPA Cooperative Agreement

California received delegated authority from USEPA to carry out and enforce the state's pesticide regulatory program in 1975. An annual cooperative agreement between the two agencies delegates enforcement authority to California under the agreement. DPR identifies state priorities and reviews its program to assure its activities incorporate USEPA's national priorities.

A second cooperative agreement between USEPA, DPR and the CACs ensures a unified and coordinated program of pesticide episode reporting, investigations, and enforcement action in the state. It sets criteria that define a priority incident, and, for episodes that meet that definition, it establishes specific reporting requirements to DPR and USEPA and sets timeframes for the submission of episode investigation reports. The defining criteria are based on the effect to human health and environment, the significance of any economic loss, and other specific circumstances. The agreement establishes that an enforcement action on a priority incident by USEPA or DPR/CACs does not preclude action by the other party. It provides that required reports will be used to evaluate the investigations and actions to assure compliance by the state obligations under its federally delegated authority.

DPR-USEPA Work Plan

DPR develops its annual work plan and mid-year report in consultation with the USEPA based on the annual guidance letter issued by USEPA.

The work plan provides an overview of each key area of the state program and related branch activities, outlines the conduct of the activities, and lists specific deliverables DPR will provide to Region 9 on a quarterly, mid-year, and end-of-year basis. Included are the types of training DPR will conduct or participate in or conduct, recently passed or pending regulations, DPR policy interpretations issued to CACs, the number of anticipated and agreed-upon inspections in all categories, and all priority investigations and our enforcement response.

DPR and USEPA Region 9 staff meet at least semi-annually to review progress and to refine program goals. The figures below represent work outputs generated strictly under the annual USEPA cooperative agreement.

DPR Federal Activities per USEPA Cooperative Agreement - Outputs	2007	2008	2009
Total Inspections Conducted under the USEPA Cooperative Agreement	400	393	417
Producing Establishment Inspections	40	44	57
Product Compliance Inspections	130	130	130
County Oversight Inspections	230	219	230
Samples Collected to Determine Compliance - Label Ingredient Statement	35	34	50
Cases Forwarded to USEPA for Action	79	74	55

7) Compliance Assistance and Training

DPR conducts a variety of outreach activities with counties, industry, and the public to educate and inform stakeholders to gain compliance with our laws and regulations.

Promoting Safer, Less-Toxic Pest Management Strategies

DPR's Pest Management Alliance Program has been one of its most successful initiatives, developing partnerships with the private sector that promote safer, less toxic strategies with economic benefits as a bonus. Many Alliances have become self-sustaining statewide efforts that permanently change an industry's pest management strategy for the better. Budget cutbacks forced DPR to suspend the grants in 2002, but with Administration support, the program was revived in 2007. These projects are closely tied to DPR's regulatory priorities for the protection of air, water, and human health in agricultural and urban environments.

In 2009, DPR funded an additional three projects, bringing total funding for its Alliance grants program to $1,560,988 for the last three years.

2007 funding with project completion dates of May 2010

- *Almond* – Aims to reduce the use of highly toxic pesticides by 25 percent at three demonstration sites ("Almond PMA II", Community Alliance with Family Farmers, Marcia Gibbs, $217,860).

- *Grape* – Extends reduced-risk wine grape pest management strategies to wine, table and raisin grape growers in the San Joaquin Valley ("California Grape Alliance Self-Improvement Model and Performance Metrics", California Sustainable Winegrowing Alliance, Joe Browde, $183,640).

- *Urban Pest* – Seeks ant control alternatives to pyrethroid insecticides identified as a runoff hazard in urban streams ("Urban Pest Ant Management", UC Riverside, Michael Rust, $183,488).

2008 funding with projection completion dates of May 2011

- *Peach* – Focuses on a 20 percent cutback in the use of organophosphate insecticides used by the canning peach industry in the San Joaquin Valley ("Biologically Integrated Orchard Systems [BIOS] for Canning Peaches", UC Riverside, Marshall Johnson, $195,000).

- *Urban Child Care* – Takes the IPM principles successfully applied by DPR to California schools and extends them to child care centers beginning with a survey of child care providers in the San Francisco Bay Area and development of English and Spanish-language educational materials on common pests ("Integrated Pest Management for Urban Child Care Programs", UC San Francisco, Abbey Alkon, $215,000).

- *Waterways Runoff* – Focuses on reducing pesticide runoff up to 10 percent by 2011 by tomato, alfalfa, walnut and wine grape growers in the Sacramento-San Joaquin Delta ("Management of Pesticide Runoff in County Waterways", San Joaquin County RCD, Mike Wackman, $175,000).

2009 funding with project completion dates of May 2011

- *Maintenance Gardeners* – Collaborates with community partners to train maintenance gardeners on IPM principles with the goal of improving pest management decision-making and reducing pesticide misuse in urban landscapes ("Integrated Pest Management for Maintenance Gardeners", San Luis Obispo County Agricultural Commissioner's Office, Tamara Kleeman, $61,000).

- *Urban Housing* – Seeks to reduce misuse of pesticides in primarily low-income housing in urban areas (("Healthy Homes Alliance", Physicians for Social Responsibility, Martha Dina Arguello and Katherine Attar, $200,000).

- *Bedding Plants* – Addresses pest management in the bedding plant/container color industry, where producers grow many varieties, have short production schedules, and regard aesthetic quality as essential ("Integrated Pest Management in Bedding and Container Color Plants", UC Davis, Michael Parrella, $139,000).

Information about the grants and the Pest Management Alliance Program is available on DPR's website at http://www.cdpr.ca.gov/dprgrants.htm.

Protecting Children's Health

The Healthy Schools Act (HSA) put into code DPR's voluntary School Integrated Pest Management (IPM) program and added additional requirements for schools and child day care facilities. HSA requirements for schools and child day care facilities include parental notification of pesticide applications, posting warning signs, recordkeeping and pesticide use reporting by licensed pest control businesses that apply pesticides at schools or child day care facilities. DPR is committed to facilitating the adoption of IPM policies and programs and assisting with the implementation of HSA requirements in schools and child day care facilities throughout California.

DPR's School and Child Care IPM Program accomplishments during 2009 include the following outreach and education efforts:

- Conducted four regional full-day school IPM training workshops for school district IPM coordinators.

- Presented at Multi-County School Facility Planners Meetings, the Resource and Referral Network Conference, the National Head Start Conference, and the International IPM Symposium.

- Participated in the National School IPM Working Group and the Western Regional School IPM Working Group.

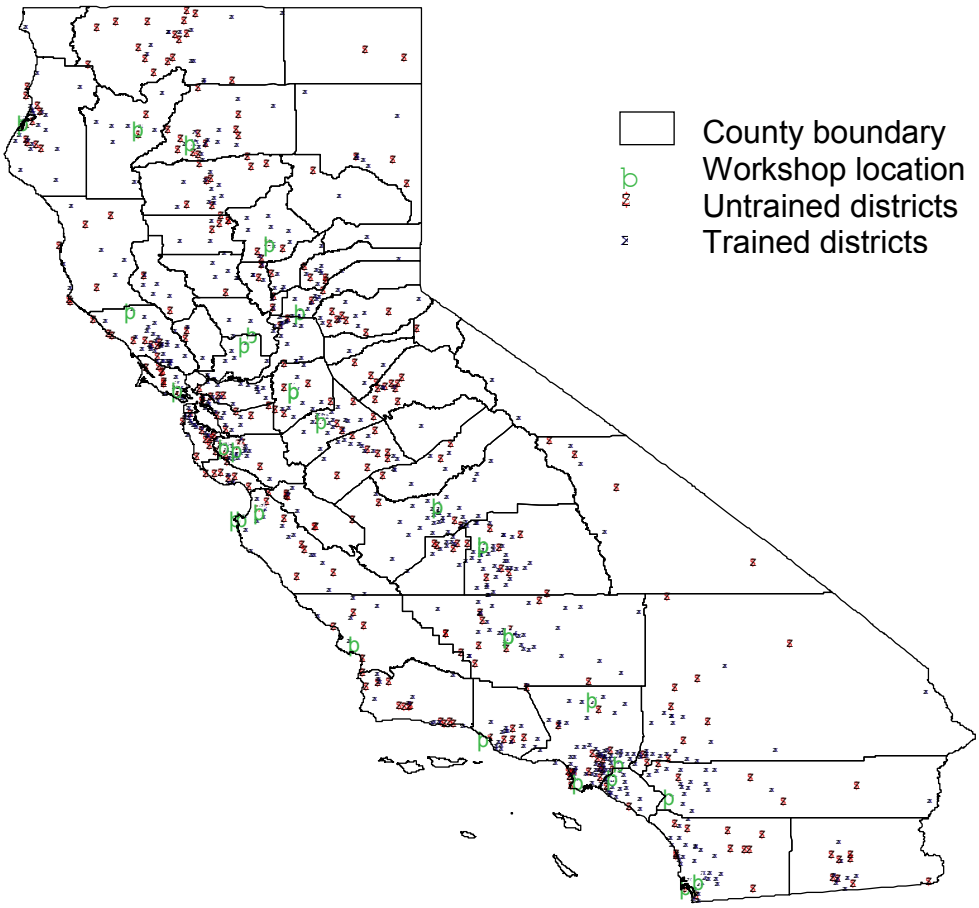
- Staffed the school IPM outreach booth at the California School Employees Association Conference, the California Green Schools Conference, and the Coalition for Adequate School Housing Conference, as well as Cal EPA's Earth Day.

- Developed and printed the 2009-2010 school IPM record-keeping calendar, adapted school IPM pest fact sheets for the child-care setting and distributed child-care oriented IPM publications in English and Spanish to community care licensing offices.

- Published HSA article in pest control operators newsletter, as well as six articles in "Health Connections," the California Childcare Health Program newsletter, and published the 2007 School IPM Survey Report.

The map graphically displays the total number of school districts that have received training on IPM practices and requirements of the Healthy Schools Act through 2009.

California Public School Districts in 2009



Protecting Workers' Health

In 2004, the Legislature amended the California Food and Agricultural Code (FAC) to require that DPR "create a program to conduct outreach and education activities for worker safety … to include … rights and procedures of workers and those potentially exposed to pesticides and how to file confidential complaints." Although this mandate was not funded, DPR pursued funding and hired one individual in November 2007 to initiate outreach activities aimed at reaching Hispanic workers and communities.

Staff from the Worker Health and Safety Branch participate in workgroups; provide literature to migrant clinics and other care facilities; make contacts and participate in presentations; attend meetings and staff information booths at health fairs and other festivals to respond to questions on pesticide safety and provide information literature; and participate in various radio and television interviews. Many events are held on weekends and after hours and generally require long distance travel.

During 2009, working cooperatively with representatives from various community health and farm advocacy groups, Worker Health and Safety, Enforcement and CAC staff participated in various parent meetings, labor camps, indigenous events and health fairs:

- Distributed pesticide safety literature and provided information at more than 30 community events including festivals, sports events, informational meetings, health fairs, and similar occasions to promote pesticide safety for farm workers and their families. Total attendance across the various events throughout the state estimated at 40,000.

- Made regular monthly visits to a health service center in Stanislaus County to hold discussions on safe home pesticide use with low-income mothers.

- Participated in three workshops on farm worker safety in collaboration with the University of California Davis' Western Center for Agricultural Health and Safety. Three major topics covered in each workshop included pesticide safety, heat stress awareness, and farm equipment safety.

- Gave two interviews to Radio Bilingue, once for Spanish speakers and one translated to the indigenous Mixtec language.

- Appeared in one interview and one commercial with KSCO Telemundo 33, a major Spanish-language television station(s) in the Central Valley with viewership estimated at 20,000.

- Recorded a one-minute public service announcement on pesticide safety for farm workers, which Spanish-language radio station La KE BUENA aired up to ten times a day for two weeks.

- Took advantage of two opportunities to ride with San Diego and Imperial Valley CAC inspectors to learn about inspections, talk with farm workers, and distribute pesticide safety information.

- Led four USEPA sponsored "breaking barriers" training sessions to help CAC inspectors learn to interact positively with immigrant workers. These sessions included basic language instruction as well as introductions to Hispanic culture and social behavior.

- Border 2012 – worked on the outreach component of the Valifornai-Baja California Integrated Pesticide Illness Surveillance Project (Border 2011). Helped to develop and distribute materials for

Imperial Valley residents, led four focus groups to evaluate the acceptability and effectiveness of the material, and surveyed the community to assess the impact of the outreach material.

Urban Pest Management

One of DPR's core roles is to ensure the competency of individuals and businesses who apply pesticides. For many years, DPR's Licensing and Certification Program has recognized that there is a low level of compliance among individuals who perform pest control for hire incidental to their maintenance gardening (MG) services. Generally, these businesses provide routine lawn and garden care for homeowners and are required to obtain a MG pest control business license and to have a certified qualified applicator on staff. In addition, DPR recognized the need to limit MG pesticide use to only general use pesticides.

In late 2008 and continuing through 2009, DPR partnered with San Luis Obispo County in a pilot project to identify, train, and certify MG pest control applicators and to license those businesses. At the time, San Luis Obispo County was already engaged in a project to air public service announcements to inform homeowners and MG pest control applicators and businesses of the requirements to become certified and licensed. In addition, San Luis Obispo County was conducting compliance inspections, assessments and taking enforcement actions aimed at MG pesticide applicators and businesses. Efforts in 2009 included:

- San Luis Obispo County conducted extensive outreach including public service announcements, press releases via TV and radio, plus interviews on Spanish-language TV.

- Rather than assessing a monetary fine, San Luis Obispo County focused their enforcement actions to encourage workshop attendance, examination, and licensing.

- Together with UC's Integrated Pest Management program, DPR completed the Maintenance Gardener Study Guide and exam questions; and developed training materials in English and Spanish including workbooks and power point presentations. The workbooks are designed to make the material more comprehensible and easier to learn.

- DPR waived the qualified applicator certificate (MG category) application and examination fees for individuals participating in the workshops.

- DPR and San Luis Obispo County conducted two workshops and examinations in conjunction with the workshops in November and December 2009. An additional six workshops in English and Spanish took place in early 2010. All workshops were conducted on Saturdays during the "off"-season" for MG work.

- Of the 118 workshop attendees, 103 passed the examination and were issued their MG qualified applicator certificate. The pass rates for both the English and Spanish workshops were high:
  Spanish - 81%
  English – 95%

Based on the success of this pilot project, DPR is focusing its efforts on several fronts in 2010 by:

- Obtaining federal funding through the 2010/2011 USEPA cooperative agreement to continue the San Luis Obispo pilot project with an additional two English and two Spanish workshops and exam sessions and to initiate a second pilot project in Stanislaus County with three English and three Spanish workshops and exam sessions.

- Encouraging other counties and independent trainers to take advantage of DPR's and UC IPM's training materials and resources to provide MG outreach and training.

- Finalizing and submitting a regulatory package that formally establishes the MG license category; and encouraging the development of MG-oriented continuing education courses for those individuals with a MG qualified applicator certificate.

General Outreach

During 2009, DPR staff made approximately 50 presentations to various industry groups to present updates on pesticide laws and regulations covering a variety of subject areas including endangered species, licensing requirements, VOCs, respiratory protection, worker protection, pesticide use reporting, registration and labeling, rice herbicides, pest management practices, drift prevention, structural pest control, and enforcement response regulations. Attendance at each presentation ranges from 50-500 individuals.

DPR maintains a "compliance assistance" website aimed at providing up-do-date information for employers and others who are required to comply with pesticide laws and regulations. The site provides a wide range of information on worker safety; licensing; pesticides subject to special conditions (i.e., minimal exposure, dormant spray, field fumigant, and ground water restrictions; engineering controls; restricted entry intervals; and personal protective equipment); state and national pesticide databases; and state and national pesticide-related resource centers. On average, DPR's main compliance assistance website receives approximately 10,000 hits annually; this does not include the number of times specific documents were viewed or downloaded. The website is available at http://www.cdpr.ca.gov/docs/dept/quicklinks/compliance.htm

Training

Throughout 2009, Enforcement Branch staff arranged and conducted 16 training sessions for 634 CAC staff in the following areas.

- Structural pest control enforcement training.
- Field worker notification regulations update – new requirements for notification, hazard communication, and application specific information.
- Breaking Barriers – to assist non Spanish-speaking inspectors who interview non English-speaking field workers and applicators.
- Investigative techniques – small group training on regional basis.

Enforcement Program Metrics

Data Characteristics

The DPR develops a calendar-year summary of annual statewide CAC pesticide enforcement program statistics. This annual California Enforcement Statistical Profile consolidates CAC data from several DPR database sources. In addition to the statewide ESP, individual county profiles are available at http://www.cdpr.ca.gov/docs/county/enf_stat_profile.htm.

The statistical profiles were developed to look at available data in a different, more comprehensive format. The CACs and DPR may use this information to develop county enforcement work plans, conduct effectiveness evaluations, and to:

- Identify trends and program changes.
- Identify CAC staff training needs.
- Identify industry outreach needs.
- Improve inspection compliance.
- Develop inspection targeting programs.
- Compare county data to statewide, regional, and/or other counties with similar characteristics.

Trends in Key Enforcement Indicators Over Time

DPR has been collecting inspection compliance data from the counties since 2003/04. As with any new system, the data quality in the first few years was poor. Although it has improved in the last two years, the system lacks sophisticated validations and must rely on data entry instructions and ongoing manual reviews to ensure data quality. DPR will continue to compile basic statistics on the number of violations, violation types and categories, and overall compliance rates.

As noted earlier, DPR adopted the enforcement response regulations in late 2006. These regulations were intended to strengthen environmental enforcement and affect statewide consistency of enforcement responses used by the CACs when acting upon pesticide violations.

DPR and the CACs use the regulations to determine the appropriate type of enforcement response in a given case, which involves a two-step process:

1. Classify the type of violation.
2. Using that classification, determine the appropriate action by following the progressive enforcement required by the regulations.

Unfortunately, we will not see the true impact nor be able to accurately gauge the change in enforcement and compliance rates for several years as it takes a minimum of five years to accurately and effectively measure the results and see long-term change.

DPR captures data on enforcement actions once the action is closed and all appeals have been exhausted. It is important to note the county must take an enforcement action for agricultural violations within the two-year statute of limitations. For structural violations, the statute of limitations is one year. In addition, the respondent is entitled to several levels of appeal that may prolong the period of time before the closure of any single case. For these reasons, DPR does not anticipate that it will be able to fully assess the impacts of the enforcement response regulations until 2010 or beyond.

Once fully integrated systems are available in the future, DPR will be able to evaluate violations in relation to pesticide use patterns, correlate enforcement actions with specific illnesses or other investigations, and assess the impacts of regulatory programs. This will allow DPR to refine and focus strategic and operational goals and priorities.

Program Inputs

DPR's inspection tracking database was implemented in 2003 and is the vehicle used to evaluate compliance by industry with state, federal, and local pesticide laws, regulations, and permit conditions.

Since 2003, new regulations governing volatile organic compounds (VOCs), respiratory protection, structural pest control operations, and protections of ground water have gone into effect. In 2008, the Enforcement Branch, working with DPR's Information Technology Branch, concentrated its efforts on documentation and system design modifications to the inspection tracking database. Development, testing and database conversion were completed in 2009. DPR will begin capturing compliance data on the new requirements in January 2010.

As a result, there has been a delay in analyzing the data DPR collects to assess the impacts of its regulatory programs on compliance and protection of workers, human health, and the environment has been delayed. At this time, DPR has been able to only minimally accomplish its goals for use of the data.

2009 Enforcement Branch by Location – Staff Resources	
Headquarters	
Branch Chief	1
Supervisors / Program Managers	5 Managers, 20 Staff
Regional Offices	
Northern Regional Office	1 Manager, 10 Staff
Central Regional Office	1 Manager, 12 Staff
Southern Regional Office	1 Manager, 9 Staff

Program Outputs

Summary of DPR & CAC Enforcement Program - Outputs	**2007**	**2008**	**2009**
Inspections			
DPR Oversight Inspections (USEPA & State)	290	440	380
CAC Inspections	18,240	18,800	17,540
Total Inspections	18,530	19,240	17,920

Program Outcomes

Summary of DPR & CAC Enforcement Program - Outcomes	**2007**	**2008**	**2009**
Administrative Enforcement Actions			
CAC Civil Penalties			
Number of Cases Referred to District Attorney	2	2	3
Number of Closed Cases	1,113	845	713
Number of Violations in Closed Cases	1,617	1,196	1,007
Penalties Assessed	$613,800	$437,400	$328,900
DPR Penalties for Unregistered & Misbranded Products			
Number of Cases	117	94	91
Number of Unregistered Products in Case Settlements	535	583	259
Penalties Collected	$1,776,293	$1,414,191	$1,024,131

California Enforcement Statistical Profiles

DPR develops annual calendar-year summaries of statewide CAC pesticide enforcement program statistics. The California Enforcement Statistical Profile consolidates CAC data from several DPR database sources. DPR also produces and publishes individual county enforcement statistical profiles.

Included is information showing DPR and CDFA funding of the CACs. The profiles do not include county general funds allocated in each county to support the local program. The enforcement statistical profiles are available on DPR's website at: www.cdpr.ca.gov/docs/county/enf_stat_profile.htm and consist of the following:

- Annual Statewide Pesticide Enforcement Program Statistics: General statistics about the CAC program drawn from the PRAMR and PUR databases, and funding disbursed by CDFA via the unclaimed gas tax distribution and by DPR via the mill assessment.

This is a three-year side-by-side comparison of several statistics regarding restricted materials permits (such as number of: permits issued, permits denied, multi-year permits, sites, and notices of intent reviewed, assessed and denied), pounds of pesticides used, number of applications, number of inspections and CDFA and DPR funding. This information can be used to identify significant year-to-year reductions or increases that may impact the county's overall pesticide enforcement program.

- Statewide Work Load Distribution by Percent Time: Pie charts showing workload distribution by percentages of time dedicated to various categories of the CAC pesticide enforcement program (PRAMR)

The pie charts show a three-year side-by-side comparison of CAC time spent in eleven different categories of pesticide use enforcement work. This information is used to identify areas where excessive or minimal time is dedicated to specific work categories that may not be appropriate for an individual program. It can also be used to identify significant year-to-year reductions or increases that may impact their overall pesticide enforcement program.

- Statewide Inspection Compliance: Compliance information from the various types of inspections conducted by the CACs and a summary of the number of compliance and enforcement actions taken (Inspection Tracking Database).

These tables list the numbers of inspections and compliance rates for each inspection type the CACs conduct each year. It also shows the number of criteria out of compliance per inspection, the percentage of inspections with 100 percent compliance, and the number of inspections where one or more violations were found.

The last number on the table can be compared with the number of compliance and enforcement actions taken during the same period, however, the numbers do not correlate directly. Not all compliance and enforcement actions are closed during the fiscal year in which it is initiated. Additionally, some actions may result from the discovery of violations by means other than inspections, such as investigations.

This information can be used to identify areas of particularly low compliance where industry outreach or changes in targeting strategies may be used to improve compliance. Areas of particularly high compliance where DPR's field experience indicates that the compliance rate is not as high may identify a need to review the CAC's inspections to determine if additional training is appropriate for CAC staff.

As noted elsewhere, DPR is working toward the development of a fully integrated database system. One of the goals is to link and track violations with the immediate corrective action taken in the field at the time of the inspection.

- Most Common Violations-Statewide: A listing of the most frequently cited code section violations on CAC inspections (Inspection Tracking)

They can be used to indicate areas where industry outreach and training is most needed.

Environmental / Health Outcomes

Environmental Indicators (EPIC) to Report on Key Environmental Trends

The following environmental protection indicators are highlighted in this report since DPR collects, analyzes, and publishes detailed annual reports on these program areas. The annual reports, along with trends analyses, are quite comprehensive. DPR publishes these reports and makes them available on its website.

Monitoring Residues in Food

If pesticides are properly used according to label instructions, there should be no illegal residues on harvested produce. Tolerance levels for pesticide residues on produce are intended to protect against adverse impacts on human health. The presence of illegal residues may indicate improper or illegal pesticide use. Illegal pesticide use can also adversely impact the health of wildlife and sensitive ecosystems.

DPR's state-mandated Pesticide Residue Surveillance Program is the most extensive state monitoring program in the United States. DPR takes and analyzes approximately 3,500 samples of fresh produce annually. DPR samples individual lots of domestic and imported produce and analyzes them for pesticide residues to enforce the tolerances set by the USEPA. Samples are collected throughout the channels of trade, including packing sites, wholesale and retail markets, and farmers markets. Samples are taken to a CDFA laboratory where all are tested with multi-residue screens capable of detecting more than 200 pesticides and breakdown products. In addition, selected samples receive specific analyses for non-screenable pesticides of enforcement concern.

DPR State Residue Program	**2006**	**2007**	**2008**	**2009**
Total number of samples taken	3,590	3,562	3,483	3,429
Number of commodities sampled	90	100	140	180
Sample origins				
Domestic samples	69.4%	60.8%	55.4%	57.4%
Imported samples	30.6%	38.7%	43.3%	41.6%
Undetermined origin samples	NA	0.5%	1.3%	1.0%
Sample analyses results				
No pesticide residues detected	63.5%	62.6%	70.2%	73.4%
Residues within legal tolerance levels	35.2%	36.2%	28.7%	24.2%
Samples with illegal residues	1.3%	1.2%	1.1%	2.4%

Pesticide Residue Surveillance Program annual reports summarizing the results from samples collected during the calendar year, along with the detailed data, are available from DPR's website at www.cdpr.ca.gov/docs/enforce/residue/rsmonmnu.htm.

In addition, annual reports of the the data analyzed from samples DPR collects, as well as data collected by other states, under the USDA's PDP and MDP are available from USDA's Agricultural Marketing Services website at www.ams.usda.gov/AMSv1.0.

Pesticide Use Trends

Pesticides can increase the quality and production of agriculture and enhances public sanitation (water, food preparation, etc.). However, these benefits are not without risks to human health and the environment. Because pesticides are designed to be toxic to unwanted organisms, there are many public concerns about the widespread use of pesticides and the potential risks they pose to human and environmental health.

DPR analyzes PUR data to provide both an overview of pesticide use in California and, along with information from other sources, some explanations for the trends of pesticide use.

The summary reports of pesticide use by crop and active ingredients for each year provide hundreds of pages of data. Without extensive-time consuming analysis, it is difficult to get an overview of the most-used pesticides or most heavily treated crops and how the uses of these pesticides have changed over the years.

These data are studied in detail and analyzed in a number of different ways to help us understand some of the reasons for the patterns and trends in pesticide use. These kinds of analyses can help agencies understand where efforts to promote reduced-risk pest management strategies are succeeding or failing, help researchers better identify emerging challenges and direct research attention to finding solutions, help regulators arrive at realistic policy decisions that are both environmentally and economically sound, and help the public understand why certain practices are used. The most recent trends analysis summarizes pesticide use from 1996 through 2007 for eight different pesticide categories according to certain characteristics including:

- Reproductive toxins
- Carcinogens
- Insecticide organophosphate and carbamate chemicals
- All chemicals categorized as ground water contaminants
- Chemicals categorized as toxic air contaminants
- Fumigant chemicals
- Oil pesticides which include many different chemicals, but the category used here includes only ones derived from petroleum distillation. Some of these oils may be on the State's Proposition 65 list of chemicals "known to cause cancer" but most serve as alternatives to high-toxicity pesticides. Oils are also used by organic growers.
- Biopesticides that include microorganisms and naturally occurring compounds, or compounds essentially identical to naturally occurring compounds that are not toxic to the target pest (such as pheromones).

For more detailed information on pesticide use and trends, annual analyses are available on DPR's website at www.cdpr.ca.gov/docs/purmain.htm.

Tracking Pesticide Illness

Pesticides have been associated with adverse effects on human health. Given the nature of their contact with pesticides, agricultural and pest control workers are most likely to face exposure to pesticides. The

public may be exposed to pesticides in water, soil and air due to misuse or drift from sprayed areas. Consumers may face exposure from home-use pesticides, or to pesticide residues in food. Unacceptable risks may be avoided when pesticides are used properly, and when pesticide laws and regulations are enforced vigorously and consistently.

DPR's Pesticide Illness Surveillance Program (PISP) maintains a database of pesticide-related illnesses and injuries. Important sources of case identification include workers' compensation documents, the California Poison Control System, and physician reports to local health officers. The local CAC investigates circumstances of exposure. Medical records and investigative findings are then evaluated by DPR technical experts and entered into an illness registry. These data help validate the effectiveness of exposure control measures and identify areas where improvements are needed. Analyses of trends in illness and injury produced by a particular pesticide or activity also provide direction for the Exposure Monitoring Program, Industrial Hygiene Program, and Exposure Assessment and Mitigation Program.

The following is a summary of case reports received by DPR's Pesticide Illness Surveillance Program, 2006-2008 in which human health effects were evaluated after investigation, as "definitely, probably, or possibly related"[a] to pesticide exposure. The data are reported by exposure circumstances (agricultural pesticide use vs. any other exposure situation) and by type of pesticide (antimicrobials and all other pesticides).

Year	Agricultural Pesticide Use Exposure[b]		Non-Agricultural Pesticide Use Exposure		Total Incidents
	Pesticides Other Than Antimicrobials	Antimicrobial Pesticides	Pesticides Other Than Antimicrobials	Antimicrobial Pesticides	
2008[c]	273	36	291	285	885
2007	308	11	291	372	982
2006	218	4	68	148	438

[a] Definite relationship indicates both physical and medical evidence document exposure and consequent health effects.. Probable relationship indicates limited or circumstantial evidence supports a relationship to pesticide exposure. Possible relationship indicates health effects correspond generally to the reported exposure, but evidence is not available to support a relationship.

[b] Designation as "Agricultural" indicates exposure to a pesticide intended to contribute to production of an agricultural commodity.

[c] Because of extraordinary delays in case processing, figures for 2008 are not yet final and have not been released.

Annual reports are prepared from the PISP database and summarize illness data by:

- State and county.
- Type of illness and type of pesticide.
- Type of activity and type of exposure.
- Specific pesticide and type of illness.
- Occupational status and location of incident.
- Gender, age distribution, type of pesticide and type of use.
- Pesticide handler activity (applicator, mixer/loader, flagger, etc.).
-

Annual reports dating from 1996 to 2007 that provide detailed information can be obtained from DPR's website at www.cdpr.ca.gov/docs/whs/pisp.htm

Ecological Health

Pesticides are designed to be toxic to target pests. While their use instructions are intended to prevent adverse impacts on non-target species, including wildlife, there have been instances when pesticide use

has been linked to adverse impacts on birds, bees, and other non-target species. The following is a four-year summary of "priority incidents" involving potential pesticide use affecting California wildlife:

Year	Fish	Bird	Wild Animals	Domesticated Animals/Bees
2009	01-ALA-09 5,000 Fish No violations found. No action taken			40-TUL-09 7 Goats Ongoing investigation
2008	36-CAL-08 2,000 Fish Civil penalty action taken and fined paid. 69-SCR-08 49 Fish Notice of warning issued to lodge/restaurant owner	55-MON-08 70 Geese No violations found. No action taken.		
2007	57-CC-07 500 Fish (unconfirmed #) Civil penalty action pending	35-SBD-07 11 Geese Civil penalty action pending	3-STA-07 1 Coyote, 1 Raccoon Veterinarian determined malnutrition as cause of death. No action taken.	3-STA-07 10 Cows Veterinarian determined malnutrition as cause of death. No action taken.
2006		3-TUO-06 50 Birds; 5 Birds-Threatened Responsible individual and label violation could not be determined. No action taken.		18-KER-06 Bees (Unknown Total)

The USEPA cooperative agreement sets specific criteria used to classify an incident involving a pesticide(s) as a priority incident depending on the effects and type of incident (human health, environment, and economic loss). These effects criteria can be viewed under the cooperative agreement link (Attachment A) on DPR's website at http://www.cdpr.ca.gov/docs/enforce/enf_auth.htm.

C) Program Limitations

Each of the data systems discussed in this report is an independent data system. It is difficult to link data from one system to another. These systems are outdated and lack sophisticated validation to assure data quality and integrity. In addition, other DPR programs collect data on priority investigations, illnesses, ground and air monitoring studies, and endangered species. Further, DPR does not have the ability to receive CAC workload, inspections, and enforcement action data electronically from the counties.

Many DPR and CAC workload and standard enforcement and compliance reports are based on the fiscal year. (Exceptions to this are the annual pesticide use, residue, and pesticide illness surveillance reports and the CAC enforcement statistical profiles.)

As noted earlier, much of the data presented in this report for the 2009 calendar year is preliminary due lag times in reporting and compiling data. In addition, many of DPR's reports are compiled on a fiscal year basis, leading to discrepancies between data in this Cal/EPA Enforcement Report and other DPR reports. DPR will address more timely reporting, collection and processing of data in the coming years.

In the case of the pesticide use reporting system, specific geographic location data are limited by the type of agriculture that is being reported. For example, the geographic location of right-of-way sites is reported at the county level while crops or other production agricultural sites are reported at the section level. A section is generally one square mile in area. In many cases, a section is too large for truly accurate assessments of environmental impacts. For example, it is not possible to determine the amount of pesticide used within a certain number of feet of a specific site due to the size of the reporting unit. Further, soil types may vary significantly within the square mile and thus the potential of pesticides to runoff or leach to groundwater varies accordingly. However, because the exact locations of applications are reported, pesticide regulations must be designed so that every circumstance presented in the entire section is protected.

In the next two to five years, the Enforcement and Worker Health and Safety branches will develop an application to bridge existing databases (inspection, pesticide illness, enforcement action, and residue databases) that currently exist independently. These databases are used to evaluate county performance and compliance trends, residue and exposure to pesticides, implementation of the state worker safety regulations and provide input on changes to the federal worker protection standard.

To address these data management issues, DPR is undertaking an internal review and analysis of these systems, interrelationships, and functionality to develop a conceptual design. This will set the foundation to build a fully integrated pesticide regulatory data management system in the future that can improve the overall assessment of DPR programs and their effectiveness in protecting human health, food safety, and the environment.

DPR has not integrated and analyzed data from these various sources to fully assess the impacts of its programs to improve environmental and human health. In 2007, the Enforcement Branch redirected resources and upgraded positions to begin the process of bringing these systems together to develop an integrated approach to analyzing compliance. DPR concentrated its efforts in 2008 on developing sound scientific and statistical procedures and methods to begin the process of fully assessing its programs and their overall impact on improving human health, food safety, and the environment. In 2009, DPR focused on conversion and implementation of a modified inspection tracking system to capture changes in regulatory requirements that had become effective during the previous five years. DPR and the counties began evaluating industry compliance with these new inspection criteria (field fumigations, respiratory and groundwater protection, and structural pest control) in 2009. Final database conversion occurred during the first quarter of 2010.

III. WHAT ARE WE GOING TO DO: FUTURE DIRECTIONS

DPR and the CACs have undertaken a joint project to assess a number of issues identified over the last two years related to processes and data collection. The work group held its first meeting in April 2008 and focused its efforts on three areas:

- All planning, reporting, and evaluation activities and deliverables are currently conducted between the counties and DPR on a fiscal year basis during a four-month period (June-September). This does not allow for thorough and timely input and dialog between the counties and DPR and the deliverables are delayed.

The work group addressed this issue in 2008 by revising the schedules for DPR's evaluation of county performance and the CACs' development of county work plans. Evaluations are now due September 30 and county work plans are developed for the following calendar year. This should allow sufficient time for collection, analyses and incorporation of key data and findings.

- Discrepancies in reporting various data became evident during a project requested by some CACs to summarize received and approved/denied decision reports [required by the Enforcement Response Regulations (ERR) when a prescribed enforcement action is not taken]. DPR and the CACs are evaluating potential sources of these discrepancies. Work on this issue continued into 2009.

- The current method of categorizing workload (PRAMR) does not accurately reflect changes in workload resulting from the implementation of the ERR. For example, counties currently report the number of enforcement actions closed during a given month. However, the workload and hours associated with follow-up inspections, case file preparation, decision report and notice of proposed action (NOPA) report writing cannot be directly associated with these specific activities. In addition, the number of hearings requested are not tracked or reported, nor are the hours associated with these activities.

As noted earlier, new senior-level Enforcement Branch staff are in the process of gaining more in-depth knowledge and expertise about state-county regulatory mandates, workload, and data systems. We expect that in the future, we will be able to more fully analyze and evaluate the impact our regulatory program has on industry compliance rates and improving environmental and human health protections. DPR will be able to answer questions such as:

- Are overall compliance rates improving?
- Have the new respiratory protection regulations reduced the number of pesticide-related illnesses for agricultural workers?
- Have fines increased as a result of the enforcement response regulations and the increased fine level authority?
- Have the number of repeat violators increased/decreased as a result of the enforcement response regulations?
- Have we reduced VOC emissions to reduce smog as a result of restrictions required to use low emission fumigation methods and/or change agricultural practices?
- Are there geographic differences in compliance in general and in specific categories of violations?

In conclusion, DPR has matured in its data gathering capability. In the coming years, we strive to better interpret our data and use it to help illustrate the DPR story.

LIST OF ACRONYMS

Acronym	Full Name
AB	Assembly Bill
CAC	County Agricultural Commissioner
CACASA	County Agricultural Commissioners and Sealers Association
CDFA	California Department of Food and Agriculture
DFG	California Department of Fish and Game
DPH	California Department of Public Health
DPR	California Department of Pesticide Regulation
EPA	Environmental Protection Agency
EBL	Enforcement Branch Liaison
EPIC	Environmental Protection Indicators for California
ERR	Enforcement Response Regulations
ETEC	enterotoxigenic E. coli
FAC	Food and Agricultural Code
HCP	Health Care Professionals
ISESALUD	Instituto de Salud Publica del Estado de Baja California
MDP	Microbiological Data Program (USDA)
MOU	Memorandum of Understanding
NAA	Non-Attainment Area
PDP	Pesticide Data Program
PISP	Pesticide Illness Surveillance Program
PRAMR	Pesticide Regulatory Activities Monthly Report
PUR	Pesticide Use Report
SB	Senate Bill
SPCB	Structural Pest Control Board
STEC	shiga toxin producing E. coli
USEPA	United States Environmental Protection Agency
USDA	United States Department of Agriculture
VOC	Volatile Organic Compound